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# China Report

AGRICULTURE

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27 March 1986

## CHINA REPORT

### AGRICULTURE

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NATIONAL

AGRICULTURE DISCUSSED AS SOURCE FOR EARNING FOREIGN EXCHANGE

Beijing JINGJIXUE ZHOUBAO in Chinese 17 Nov 85 p 3

[Article by Lu Guisheng [7120 6311 3932] "Talk on 'Agriculture that Earns Foreign Exchange'"]

[Text] "Agriculture that earns foreign exchange" refers to those high quality and well known products produced or manufactured in rural villages that are able to enter the international marketplace, and industries that earn foreign exchange for the country. With the connotations and extensions of the concept of agriculture broadening, it has become impossible to restrict the scope within which "agriculture that earns foreign exchange" is comprehended to grain, cotton, oil and other crops. Liberally defined, it should include cultivation, livestock, aquatic, forestry, and township and town enterprises as well as rural labor, service, transportation, and so forth.

Why is it necessary to understand the definition of "agriculture that earns foreign exchange"? One, our country is a nation with an enormous rural population. After the 3d Plenum of the 11th Party Central Committee, productivity of the 800 million rural population quickened, and we need to realize that they are entering a commodity economy society with a new attitude. If the view of "agriculture that earns foreign exchange" is confirmed to products, product quality will not be able to quickly enter the world market since our country's technological standards are low, and it will be difficult to broaden our thinking because product quantity does not take up a large enough share of the market. Everyone will think our country is unable to become a major agriculture product exporting country, and we will tie our own hands and feet and accomplish nothing. Second, narrowly defined "agriculture that earns foreign exchange" will only make people beat their brains out over planting and make an issue over "land," and subsequently neglect the vast universe of productive human activity. In recent years our country's great expanse of rural areas has been in the midst of shaking off the fetters of traditional agriculture so that diversified economies have achieved rapid development. Many township and town enterprises in particular are enjoying a high reputation internationally, and have become a sudden new force in "agriculture that earns foreign exchange." Third, currently the ability of our country's industrial products to earn foreign exchange is weak. Energetically

developing a liberally defined "agriculture that earns foreign exchange" will prove decisive for our country's balance of trade deficits. Fourth, a liberal understanding of "agriculture that earns foreign exchange" can develop the strategic vision for organically linking together production of rural raw materials and production of finished products from processing enterprises, change the production style of our country's rural areas away from only providing raw materials, and speed up technical transformation in rural areas. Fifth, promote "agriculture that earns foreign exchange" to form a horizontally diversified and vertically multilayered, deeply systematic engineering industry. For example, the high grade beef industry must rely on the feed industry to develop the competitive ability to win exports, and the development of beef product processing and leather industry will then be able to further raise export earning standards. Taking exports to earn foreign exchange as a goal and joining together cultivating, breeding, and processing to form a linked system of export production have a strategic significance for unearthing the latent productivity of a major agriculture country.

What are the basic points for developing "agriculture that earns foreign exchange"? (1) Set up export targets for other countries, and plan a program for developing products needed by the target country. Start from the import market needs of the other country, make market studies of other countries one-by-one, and draw up a "menu-style" table of products needed by other countries. Carry this out for every product. Use this prediction of needs as a basis for organizing production sources for our country. Currently our country's study of the Hong Kong and Macao markets is clear, but we still lack a systematic survey of other country's markets. In particular, there are some country's markets that are wholly undeveloped virgin lands. Attention cannot be fixed only on a few countries; foreign exports must go everywhere. The more countries there are for export targets, the less the impact of fluctuations from the international marketplace. (2) Establish production bases for products that have regional superiority of natural resources, broaden the range of products exported, and raise the ability to export. After reform of the production plan for agriculture products, if the state monopoly becomes a market economy for commodity production, and construction of the production base is deregulated, export commodity production will become unplanned. Not only will quality not be guaranteed, quantity will also fluctuate up and down with changes in foreign trade purchases. It is necessary in establishing export bases to adopt on the basis of regional superiority in natural resources protective measures for production, such as protecting purchase prices and returning a portion of foreign exchange profits for investment in order to implement a market economy in the base areas. It absolutely does not negate a planned economy. It is necessary to arrange for export base construction on the basis of export assignments. (3) Gradually form economic institutions and systems that stimulate the development of "agriculture that earns foreign exchange." In the past, we had the habit of treating foreign export trade as an administrative duty to be assigned to localities, which made the localities passive in producing commodities for export. Some called this "blindman production" and "doing business separated by a mountain." Production units and foreign



trade departments had two different skins. Foreign trade departments were the only unit to earn foreign exchange, and agriculture departments seemed to be unconnected with the earning of foreign exchange. This system seriously affected the formation of our country's "agriculture that earns foreign exchange." Something worth reflecting on is the output-related contract responsibility system making farmers independent producers of commodities. Their productive behavior will be promoted by private operation.

"Agriculture that earns foreign exchange" is a guiding principle in the implementation of trade, industry, and agriculture integration. That sort of exporting which is monopolized by only the foreign trade [departments] is a way that in principle treats the main body of production as a colony, and is a method which harms production. What should be watched out for is the excuse of using the "smuggled goods shock plan" to kill off the newborn development of "agriculture that earns foreign exchange." (4) Explore the development of new management systems for "agriculture that earns foreign exchange." Let producers meet directly with the international market. Learn in this school of the marketplace how to develop production according to the market demand. An easy road to success is to organize an association for a trade or product. This sort of association certainly should have production departments participate, and moreover become a main component. Foreign trade departments should play a supporting role. Otherwise the primary and secondary will be topsy-turvy. (5) Price policy is the mainstay of "agriculture that earns foreign exchange." A correct price policy is a strong stimulant for developing "agriculture that earns foreign exchange." A mistaken price policy can only lead to the withering of "agriculture that earns foreign exchange." Examples of this are already plentiful. (6) There can be no doubt about the position of "agriculture that earns foreign exchange" in the national economy, but the traditional ideological ghost of "wanting the horse to run, but wanting it to not eat" still exists. The party's implementation of the guiding economic principle of opening up to the outside and enlivening the domestic economy will certainly bring forth springtime for the development of "agriculture that earns foreign exchange."

13152/9190  
CSO: 4007/238

NATIONAL

OFFICIAL INTERVIEWED ON TRACTOR IMPORTS

Beijing ZHONGGUO NONGJIHUA BAO in Chinese 4 Nov 85 p 7

[Report on interview with Liu Huanwen, assistant manager of the China Farm Mechanization Service Corporation, by correspondent Yue Chuan [1471 1557]: "China Farm Mechanization Service Corporation Assistant Manager Liu Huanwen Answers Reporter's Questions on Tractor Imports"; date and place not given]

[Text] JINGJI CANKAO [ECONOMIC REFERENCE] and other journals have reported one after another the news that "a large volume of tractor imports has upset the domestic market," and this has raised attention in the domestic areas concerned. Recently, Liu Huanwen [0491 3562 2429], assistant manager of the China Farm Mechanization Service Corporation, answered our reporter's questions on the circumstances involved.

[Question] Manager Liu, please discuss the circumstances involved in China's importation of tractors from Czechoslovakia, the Soviet Union, and other nations.

[Answer] In the first quarter of 1985 China imported 11,000 tractors from Czechoslovakia and the Soviet Union. Of these, 6,600 went to the Ministry of Agriculture, Animal Husbandry, and Fishery's State Farms and Land Reclamation Bureau, 1,000 went to North China Station No 1 of the State Supplies Bureau's Mechanical and Electrical Equipment Corporation, and 3,400 went to my company. At the end of 1984 we found out that the Ministry of Agriculture, Animal Husbandry, and Fishery's State Farms and Land Reclamation Bureau wanted to import tractor models 6211 and 7211 from Czechoslovakia, and agricultural mechanization corporations from various provinces and autonomous regions one after another applied to the China National Machinery Import and Export Corporation to import them. At the suggestion of that corporation the various provinces and autonomous regions applied to import some of these through my company's centralized organization. Five northern provinces and four directly subordinate companies entrusted the matter to my company, which then applied to the State Supplies Bureau. The latter agreed to give my company 3,400 of the tractors that the Ministry of Agriculture, Animal Husbandry, and Fishery's State Farms and Land Reclamation Bureau applied to import. Of these, 3,000 were produced in Czechoslovakia and 400 were produced in the Soviet Union.

[Question] Why did we have to import this batch of tractors?

[Answer] Our analysis at that time showed the following reasons: (1) The supply of tractors on the market was insufficient to meet demand. At the time there was an enormous demand for medium and large tractors, the contradiction between production and marketing could not be alleviated within a short time frame, and various provinces and autonomous regions declared the importation of 9,000 tractors. (2) In the spirit of documents issued by the various state departments concerned, a certain number of encouraging policy measures were adopted to give impetus to the development of trade and economic and technical cooperation with eastern Europe and the Soviet Union. (3) In 1978 and 1979 we imported the same kinds of tractors from Czechoslovakia, and there are already more than 100 domestic plants producing crucial, easily damaged parts. Sixty percent of the spare parts for the tractor models 6211 and 7211 that are being imported this time are interchangeable with those for model 6911.

[Question] Does importing this large volume of tractors upset the domestic farm machinery market?

[Answer] From the perspective of the current market situation, importing tractors involves some disruptive elements that affect the domestic market, but the effect is not overwhelming. All farm machine industries are affected by state credit controls, fuel supplies, and other factors that put production and marketing in a passive position.

[Question] Consumers worry that maintenance fittings will be unavailable. What measures have you taken on this matter?

[Answer] When we ordered the main engines we also handed the Czechoslovakian party an order bill to arrange for spare parts. Parts which are damaged during the guarantee period or in the transit process will be compensated based on responsibilities stipulated in the contract. As for model-6911 tractors imported previously, in addition to making arrangements for some domestic plants to produce parts, some parts will be imported.

[Question] Some newspapers report that importing this large volume of tractors is bad for development of China's farm machinery industry. How do you view this matter?

[Answer] At the time, we imported this batch of tractors to alleviate the contradiction between market supply and demand. The goal was to expand agricultural production and promote rural economic prosperity. From today's perspective, we underestimated the effects of objective factors, made inaccurate market projections, gave the problem insufficient thought, and were unable to give the higher authorities the best advice. We are entirely responsible, and in the future we will draw a lesson from this.

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NATIONAL

## CHANGES IN PRICES OF NON-STAPLE FOOD IN URBAN CENTERS

Beijing ZHONGGUO CUNZHEN BAIYE XINXI BAO in Chinese 29 Sep 85 p 1

[Article by Shang Yan [0794 1484]: "Changes in Retail Prices of Nonstaple Food in Urban Centers"]

[Text] 1. The Rise of Retail Prices of Nonstaple Food in Urban Centers Is Inevitable Result of Reform of Whole Pricing System

For a long time, the circulation of commodities whose prices are not based on the general pricing system or determined according to the system of demand and supply have seriously hindered the development of our commodity economy. In order to rectify this abnormal situation and develop the economic system, both the party and the state have proceeded step by step to reform the pricing system as a part of the overall reform of the economic management system. Since 1985, in accordance with the state demands for the reform of the pricing system, the various regions have gradually opened up procurement prices on pork, beef and lamb, vegetables, fowls, eggs, and aquatic products. At the same time, the retail prices of the main nonstaple food items have also risen in the urban centers, following the general rising trend of the last few years. A comparison of April this year of the average retail prices of the main nonstaple food items that are managed by the state enterprises with last year shows the following increases: 17.3 percent for pork at 1.38 yuan per jin; 25.9 percent for beef at 1.48 yuan per jin; 27.5 percent for lamb at 1.28 yuan per jin; 5.2 percent for eggs at 1.21 yuan per jin; 25 percent for fresh vegetables at 0.16 yuan per jin; 16 percent for fowls; 47.8 percent for hairtail fish at 1.41 yuan per jin; and 40.1 percent for yellow fish at 2.45 yuan per jin.

## 2. Connection Between Rising Prices of Nonstaple Food and Lives of Residents in Urban Centers

A general rise in the retail prices of nonstaple food in the urban centers has led to an increase in what residents have spent on these items. The average monthly increase for such expenditures in 1984 when compared with 1978 is 5.29 yuan. For each salaried employee, this increase means an additional burden of 1.71 persons (including himself) and an additional expenditure of 9.50 yuan. After taking into account the state subsidy of 5 yuan for nonstaple food, under these circumstances, each salaried employee still has an additional expenditure of 4.05 yuan. Because of their different income and also their differing consumption of nonstaple food, all households would be affected to a differing

extent by the rising prices for nonstaple food. Nevertheless, in all these households, their increased expenditure for nonstaple food has exceeded the state subsidy of the monthly 5 yuan per person. For households where the average monthly income for living expenses falls below 25 yuan per person, the expenditure on nonstaple food has increased 2.38 yuan per person. Each salaried employee therefore carries an increased monthly burden at (at 3.07 persons) of 7.32 yuan, an amount that exceeds the state subsidy by 2.32 yuan. For the households with an average monthly income from 60 to 70 yuan, and more than 70 yuan, increased monthly expenditures on nonstaple food are 6.63 yuan and 8.37 yuan, respectively. For each salaried employee (whose increased burden is 1.49 and 1.28 persons respectively), their increased expenditures on nonstaple food items are 9.88 and 10.71 yuan, respectively, amounts that exceed the state subsidies by 4.88 and 5.71 yuan. From these figures, we can see that the consumption of nonstaple food rises with the rise in household income. At the same time, because of the increase in expenditures for them prices of these nonstaple food will rise further.

### 3. Statistics on Prices for Nonstaple Food in the First Half of 1985

For the spring of 1985, when compared with last year, the increase in total retail prices in urban centers of the whole country is 6.4 percent. The increase in retail prices of nonstaple foods amounts to 10.4 percent. According to the statistics, the increase in retail prices of nonstaple foods for the summer of 1985 when compared with the year before is around 20 percent. For the first half of 1985, retail prices of nonstaple foods have increased more than 15 percent when compared with last year, and by more than 72 percent when compared with 1978.

12740/7051

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NATIONAL

SCIENCE DIRECTOR URGES AGRICULTURAL TECHNOLOGY ACCELERATION

Beijing NONGCUN GONGZUO TONGXUN [RURAL WORK NEWSLETTER] in Chinese 5 Nov 85  
pp 34-35

[Commentary by the China Agricultural Science Director Lu Liangshu [4151 5328 1859]: "Accelerate Technical Transformation of Agriculture and Development of Talent"]

[Text] The development of all aspects of agriculture is of extreme significance in securing and stimulating the development of China's economy. In order to attain steady and stable growth in the entire agricultural sector it is crucial that science and technology progress and that the technical transformation of agriculture be accelerated. However, as the initial phase of this transformation concludes, traditional production methods still hold an important place. Furthermore, agricultural productivity is low, the dietary habits of hundreds of millions of peasants remain unaltered and both the revising of the rural production structure and the shift of labor power are being hampered by (single) agricultural operations and a weak agricultural foundation. Consequently, it is urgent that the technical transformation of agriculture be accelerated.

China has 1 billion people, 800 million of whom are peasants. Per capita arable land is low and the rural economy is undeveloped. Science is also backward. It is imperative that these fundamental givens be fully considered and that reality is squarely faced in the process of technological transformation. Thus we must select methods of technical transformation that are unique to China. These methods should combine traditional labor-intensive and modern scientific methods of cultivation. Intensive farming must be practiced and both per-unit area yields and quality must be raised: biological engineering measures should be closely linked to the practical application of modern scientific accomplishments, and technological, economic, and ecological benefits must be integrated so as to create a proper agricultural-ecological cycle. The technical transformation of agriculture must be linked with overall rural development and a multilayered agricultural technology structure must be established. Finally, the proper steps must be taken to merge the attraction of the appropriate advanced technology from foreign countries with its absorption and adaptation so as to accelerate the technical transformation of agriculture.

In order to meet the needs of agricultural modernization, the Central Committee set a target of 6-percent growth in GVAO for the period of the Seventh 5-Year Plan and laid out the basic problems to be grappled with in that period:

#### I. Material Input Must Be Gradually Increased and Conventional, Practical Techniques Must Be Employed To Raise Production Results

The principle of "reaping what is sown" must be appreciated in regard to agricultural input and output. Between 1978 and 1984, agricultural mechanization increased by 65.9 percent, rural electrification by 82.6 percent, usage of chemical fertilizers doubled and effectively irrigated fields reached 670 million mu. This is significant material evidence of the steady growth in agriculture in recent years. During the Seventh 5-Year Plan material input must continue to increase, guided by the improved application of science and technology so as to raise the economic gains obtained from production output. Concrete recommendations are as follows: 1) China's crop varieties and breed of livestock are undergoing fundamental improvement, but the phenomenon of mixing varieties, and a drop in superior varieties exists. Thus, every effort must be made to propagate good varieties and promote their dissemination and proper application so as to fully bring into play their productive potential. 2) The volume of chemical fertilizer applied has increased quickly. The amount of zhe chun [2124 4783] chemical fertilizer used per mu increased from 11.9 jin in 1978 to 22.5 jin at present, but the utilization rate was only 30 percent. In the future, the composition and variety of chemical fertilizers must be improved, compound fertilizers must be increased, application techniques advanced and an effort must be made to raise the utilization rate another 10 percent. 3) All scales of agricultural mechanization, including the use of tools and implements, must be merged into a workable system. Methods of mechanization must be selected for suitability to local conditions and machinery must be efficiently utilized. 4) The management of water facilities must be emphasized, as should water and energy conservation, the improvement of irrigation technology, and the increased effectiveness of irrigation.

#### II. Strengthen Technological Development and Promotion and Accelerate the Practical Application of New Technological and Scientific Achievements

In the recent years science research units have made many new advances which can definitely stimulate agricultural production. If one merely includes advances in rice hybridization and ground covering cultivation in the calculation, the resulting benefits exceed 10 billion yuan. During the Seventh 5-Year Plan, we must strive for scientific achievements, attract appropriate advanced technologies and quickly adapt them to production so as to accelerate the technical transformation of agriculture. Thus, we firmly grasp the need to create technological-development and promotion-service systems. These systems should become the effective carriers on which technology translates into productivity. At present, there are 400 counties in China that have established "trilateral" centers for experimentation, training, and promotion. It is hoped that by 1990 the concept will become universal throughout China and that in conjunction with the technology-promotion stations at the rural level, the experimental technology households and rural technicians, it will become an all-inclusive technological-exchange, development, and promotional

network. Organizations promoting the spread of technology and integrated management must not solely rely on national agencies for financing their operations, but must develop their self-reliance and encourage peasants to engage in all kinds of joint efforts based on voluntary participation and mutual benefits. They must also accelerate the widespread application of scientific accomplishments and help adapt the rural economy to the needs of specialization, commercialization, and modernization.

### III. Resources Must Be Organized and Strategies Coordinated for Attacking Key Problems; Important Technological Projects Must Be Researched

During the Seventh 5-Year Plan, agricultural science research units must carry out the principle that "economic development depends on science and technology, so technology and science must turn toward economic development." Closely involved with the "two changes" in the rural economy and the revolutionary challenge of absorbing new technology is the organization of resources to research technology that will aid propagation of new crop and livestock hybrids and develop preventatives for disease, pests, weeds, and rodents. Also it is important to develop overall technological management for the Yellow Sea, the three rivers' plains, the loess plateau and the red and yellow hills of the south and to find ways to increase productivity on dry northern land. To set up a commercial agricultural production base, it is necessary to bring in foreign exchange and stress the expansion of scientific research projects. At the same time, basic work and theoretical research must be enhanced. Biological engineering, computer, and remote-sensing technology and other new technological territory must be explored and quickly applied to agricultural production so as to hasten its technical transformation.

Agricultural units must actively open up technological markets, accelerate the adaptation of scientific research achievements to practical applications and set up technical consulting services. Under the right conditions, various kinds of joint science-production-research institutions should be set up, fundable from various sources so as to increase self-reliance. The nation and government departments must support the development of technology and increase funding to appropriate agencies; they must also deduct a set proportion of income earned from the sale of agricultural products and from foreign exchange earnings for the creation of an agricultural science fund. The spirit of the "decision of the Central Committee Regarding the Reform of the Science and Technological Structure" must be further effectuated by advancing the reform of the agricultural science structure. "Research, education, and dissemination" are the three sides to be stressed in organizing currently available technological resources and effectively utilizing them.

### IV. Increase the Development of Talent and the Cultivation of All Kinds of Technicians and Heighten the Scientific Awareness of Grassroots, Rural Cadres and the Broad Mass of Peasants

This is the key to accelerating the technical transformation of agriculture. China is now short of agricultural technicians; the structure is irrational because the level of scientific awareness and management capabilities of many grassroots rural cadres is low. The rate of illiteracy and semiliteracy is



high among many young and middleaged peasants. During the Seventh 5-Year Plan, 84 high-level and 469 intermediate agricultural institutes will be created. In accordance with the needs of technical development and agricultural modernization, relevant new areas of specialization will be established, student recruiting and cultivation of all kinds and levels of specialized talent will be expanded. In some areas ordinary high schools will be transformed into agricultural academies for the purpose of creating a new style peasant, knowledgeable in agriculture and well versed in production techniques. With hard work, by 1990 there will be two agricultural technicians for each 10,000 mu of tillable land and 1.5 veterinarians for every 10,000 head of livestock. With the county as the unit, a multitude of ways will be employed to accelerate the training of agricultural technicians and to fully bring into play the leading role of specialized households and those experimenting with technology. To further peasants' understanding of science and knowledge of technology and to basically eliminate illiteracy within the next 5 years will serve to create a new generation of peasants.

13030/12790  
CSO: 4007/137

NATIONAL

DEVELOPMENT OF AQUATIC INDUSTRY URGED

Beijing CAIZHENG YANJIU [FINANCE RESEARCH] in Chinese No 4, 31 July 85 pp 69-70

[Article by Shu Zhenkui [5289 2182 1145] of the Agricultural Finance Department of the Ministry of Finance: "Devote Major Efforts to Supporting Development of the Freshwater Aquatics Industry"]

[Text] I. The Necessity of Devoting Major Efforts to Developing Freshwater Aquatics in the PRC

Developing the freshwater aquatics industry can give rise to comprehensive exploitation of the nation's water resources, readjust the internal structure of agriculture, enliven the rural economy, bring about flourishing markets in the cities and countryside, and increase peasant income. The breeding of aquatics has expanded rapidly in the PRC since the 3d Plenum of the 11 CPC Central Committee, but development of the aquatic products industry continues to be a weak link in the wake of the steady rise in the living standard of the people in the urban and rural areas; the supply and demand contradiction is acute and requires prompt solution.

The PRC has abundant freshwater resources; rivers, lakes, reservoirs, and ponds are spread all over the country. According to statistics, there is approximately 300 million mu of freshwater area nationwide, of which nearly 80 million mu could be utilized for aquatic breeding; only 46.24 million mu are now being exploited, which is only 57 percent of the usable water surface area. Most of this is poorly cultivated, with an average output of 61 jin per mu; even the per-unit-area yield for ponds is less than 142 jin, so output is still quite low. It is thus clear that, since the nation's fishery resources have suffered serious damage, it is absolutely necessary to utilize fully the freshwater resources to carry on artificial breeding of aquatics.

II. The Focus of Financial Support for Development of the Aquatics Industry in the PRC

The central government and local governments at all levels have currently adopted various measures to speed up development of the aquatics industry; for example, Liaoning and Jiangxi provinces have convened provincewide work conferences on developing the freshwater fish-farming industry and have worked

out plans for speeding up fishery production. Beijing Municipality has drawn up nine provisions for expanding freshwater fish farming, which, among other things, provide for levying a charge based on the market price of 50 jin of fish products per mu for all ponds and pits lying waste and unexploited where conditions are favorable for fish farming, and require the principle leaders themselves to bear 10 percent; the expenses incurred in levying and collecting must not be written off as production costs. All these measures play an important role in promoting the development of aquatics-breeding enterprises. In the wake of the state's overall opening up of its aquatic products marketing policy, new prospects have appeared in the PRC for developing fish-farming enterprises on lakeshores, plains, hills, and mountain regions alike and for simultaneously promoting the breeding by state, collectives, and individuals of aquatic products.

To expand freshwater aquatics breeding and exploit fishery resources we should mainly consider the following:

First, transform and exploit existing water areas of all sizes. If we construct such installations as sluice gates and embankments along small lakes, ponds, reservoirs, rivers, lakes, and various kinds of hollows, or slightly transform them or make them more complete, we could raise fish while saving on investment and realizing speedy results and large returns. For example, Jiujiang County in Jiangxi Province exploited its abundant aquatics resources, suited measures to local conditions and exploited small water areas on a large scale; more than 6,000 mu of small water areas were transformed throughout the county, an average of nearly 50 yuan per mu was invested, per-unit-area yields were raised from 10-plus jin before transformation to about 60 jin, and output increased four- to fivefold.

Second, integrate aquatics breeding, propagation, and fishing, and begin to exploit large and mid-sized water areas as quickly as possible. The higher level leading departments must confer authority for exploiting large and mid-sized water areas and allow the masses themselves to proceed in accordance with local conditions. For example, Chihu Lake in Jiangxi Province has an area of more than 70,000 mu; before 1982 there were state-run aquatics farms alone, the state-run farms planted fry, the peasants fished and the aquatics farms incurred losses year after year. In 1982, the aquatics farms and fishermen set up jointly run companies, built up the enterprises through collective shares, resolved the farm-masses contradiction, strengthened management and greatly increased economic returns. Fish output was 1.6 million jin in 1983, which was a 2.13-fold increase over the 510,000 jin in 1981, before joint management.

Third, improve old fish ponds. There are more than 800,000 mu of old fish ponds nationwide and because they have been neglected for years such problems as ponds becoming shallow and hydrographic nets being broken up have arisen; with a little transformation and making the systems complete, per-mu yields could amount to 400 to 500 jin in general and could reach nearly 1,000 jin per mu in some instances, bringing about a doubling and redoubling of output.

Fourth, suit measures to local conditions and establish commodity fish bases. Output is high in commodity fish bases so it is appropriate to set up such bases in the suburbs of the large and mid-sized cities; this could both ensure the supply of fish commodities and aid in readjusting irrational aspects in fishery production, restoring the ecological balance and rational utilization of natural resources and increasing the ability to store water, combat weeds, and fertilize the land.

Fifth, develop diverse forms of fish farming. In addition to the several fashions above, we also should mobilize the masses to fully exploit waste shoals, low-lying land prone to waterlogging, mountain ponds, the area around homes and buildings, pits and holes, paddy fields, waste heat in the industrial cycle, and geothermal water to develop fish farming. There are particularly broad prospects in exploiting paddy fields for fish farming (there are nearly 400 million mu of paddy fields in the PRC; if 60 million mu could be utilized for fish farming and output were 40 jin or 300 to 500 fry per mu, the return would be considerable).

When planning funding, the financial departments acting as the unifying sector must exercise strategic foresight; not only must they consider the return to be realized from fund utilization, but they also must consider the social and economic benefits, the long-term benefits and the comprehensive benefits. Beginning in 1978 the financial departments greatly increased the funds used for developing freshwater fish farming. In 1984, there was more than 300 million yuan in support from central finances alone; this undoubtedly played a role in promoting the development of freshwater aquatics breeding. But under the new circumstances we must make the key points of support stand out in planning and utilizing fiscal funding to suit the requirements of the aquatics-breeding situation as it stands at present. I offer the following thoughts in connection with the principal forms of developing aquatics breeding outlined above:

First, we must change the approach of the preceding several years of utilizing fiscal funding mainly for setting up commodity fish bases, and expand the limited focal points of funding to include utilizing existing water areas in the suburbs of large and mid-sized cities, nearby counties, and regions with abundant aquatics resources. This is because by carrying on fish farming in the suburbs of the large and mid-sized cities, where transport is convenient, production and supply could be carried on in the neighborhood and this would guarantee the residents of the cities fresh and live fish to eat.

Second, support the transformation of old fish ponds and turn them into complete systems, fully tap existing potential and increase output.

Third, we must support construction of fish-farming bases where conditions warrant, especially in the suburbs of the large and mid-sized cities, but we must suit measures to local conditions and not rely on a single standard.

Fourth, in terms of central finances, we must appropriately support the development of fish-farming enterprises in remote border provinces and autonomous regions where the requisite conditions exist.

The finance departments, when they plan aquatics-breeding subsidies, must implement the guiding principle of simultaneously promoting the state, the collective and the individual and change the approach of the past several years of supporting one while slighting the others. Priority for support must go to fish-farming specialized households, joint households and various combined undertakings. The original fingerling farms (stations) must adapt to the requirements of developing thousands upon thousands of households and supply them with a great quantity of improved-variety fry. As a result of current serious shortages of fingerlings and fry, fiscal funding for breeding projects should focus on supporting the production of fingerlings and fry, as well as high-yield fish-farming techniques, to bring about practical results through concentrating support at a few key points which in turn benefits the larger sector. We must support the development of the fish feed processing industry and promote high and steady output from fish farming.

The financial departments of the various localities must carry out overall planning in arranging aquatics-breeding subsidies and operating expenses; operating expenses for scientific research in aquatics must be increased appropriately. Given the current shortage of operating expenses for aquatics, in order to adapt to the requirements of vigorous development of fish farming in the rural areas, we should consider reserving from 1 to 5 percent of planned aquatics-breeding subsidies per year during the period of the Seventh 5-Year Plan to be used to invest in intellectual resources for fish farming in the rural areas and to train fish-farming technical personnel so they understand techniques, to enable them to raise fish and manage operations.

There was a great advance in fish farming after centralized and assigned procurement responsibilities in aquatics products were abolished and negotiated purchases and sales according to the market were implemented universally. In order to further arouse the initiative of the broad masses toward fish farming and to further increase the economic return from the breeding of aquatics, it is proposed that we adopt the method combining gratis and repayable aquatics-breeding subsidies, relying mainly on repayable subsidies. Whether repayable or gratis subsidies are employed, economic contracts must be signed in either case. The funds regained will be pumped back into developing fish-farming enterprises, which will expand the source of funding for such development.

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CSO: 4007/60

NATIONAL

AGRICULTURE MINISTRY ON COMMODITY GRAIN BASES

OW080808 Beijing XINHUA in English 0750 GMT 8 Mar 86

[Text] Beijing, March 8 (XINHUA)--China has completed the construction of 50 county bases for commodity grain production since the scheme began in 1983.

Construction of another 10 such bases is well underway, according to the Ministry of Agriculture, Animal Husbandry and Fisheries.

The 50 counties sold a total of 35 million tons of grain to the state during the 1983-1985 period, nearly double the amount sold between 1980 and 1982.

The bases were built through the cooperative efforts of the State Planning Commission, the Ministry of Agriculture, Animal Husbandry and Fisheries, the Ministry of Commerce, the Ministry of Water Resources and Electric Power, and the provinces of Heilongjiang, Jilin, Henan, Hubei, Hunan, Jiangsu, Anhui and Jiangxi.

Over the past three years, the state has invested some 250 million yuan in the scheme, and another 300 million has been pooled by local governments.

The state has also allocated 90,000 tons of steel and cement and 24,000 cubic meters of timber for the construction.

In these 50 counties, efforts have been made to spread agricultural technology, breed improved varieties of livestock and build small water conservancy projects.

Now each of the 50 counties has set up a center to spread agricultural technology, and 875 stations for the same purpose have been established at township level. So far, 2,700 items of technology have been introduced to the countryside and 9.6 million peasants have been trained in their operation.

As a result, the average grain output in these counties has increased by 900 kg per hectare.

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CSO: 4020/241

NATIONAL

SUGGESTIONS FOR GRAIN PRODUCTION

Beijing NONGYE JISHU JINGJI [ECONOMICS FOR AGRICULTURAL TECHNOLOGY] in Chinese  
No 12, Dec 85 pp 14-15

[Article by Hu Qiufa [7579 4428 4099] and Yuan Zhijun [5914 1807 6511] from  
Agriculture, Animal Husbandry, and Fisheries Department: "Some Suggestions  
Regarding the Emphasis on Grain Production"]

[Text] Since the 3d Plenum of the 11th CPC Central Committee, grain production has continuously increased. Starting from the second half of last year and particularly during the first half of this year, however, some problems have appeared which require attention. Many places have not stressed grain production, and this is an urgent problem that must be studied and solved. Some places have emphasized industry and ignored agriculture, reducing investment in grain production and lessening management. A few places have abandoned their land. A random survey in Hebei, Shandong, and Henan provinces has shown that farmers' investment in agricultural land was 25 percent lower in 1984 than in 1983. This year investment is one-third lower than in 1983. Lower farmer enthusiasm for grain planting (natural disasters are another factor) has produced a tendency for reduced grain production this year. Compared to last year, statistics show that nationwide production of summer grains and early rice has been reduced by 19 billion jin this year. Reduced production of fall grains is also predicted.

Reasons for the lower farmer enthusiasm for grain planting include the following: 1. An overall increase in the prices of agricultural production materials has produced an increase in the cost of grain production. Statistics gathered by the state statistics bureau show that the prices of 22 major agricultural production materials increased 8.9 percent in 1984. Increased prices for irrigation water and electricity, plus an increase in agricultural taxes, have produced an average grain-production cost increase of 6.75 yuan per mu. In addition to the increased prices for agricultural production materials, there has been a decrease in the amount of production materials available at the standard price. Surveys show that the supply of standard-priced chemical fertilizer is only one-third of the total amount used. 2. Purchase prices for grain are somewhat low. After grain purchase prices were changed to the "inverse 30-70" ratio this year, prices in major grain-producing areas have continually decreased. Wheat prices have decreased 3 fen per jin, rice prices more than 2 fen per jin, and corn prices 1 fen per jin. The combination of increased prices for production materials and decreased grain prices has emphasized the adverse effect on grain producers. In addition, there is a large

disparity between the incomes of grain farmers and workers in industry and commerce. Therefore, many farmers now feel that "as long as there is enough grain for ourselves, there is enough." They are unwilling to devote much effort to grain production and have changed farming from their major occupation to a sideline activity.

We must clearly understand that agricultural productivity is still very low in China and that most farmers are still not prosperous. In 1984 there was a bumper grain harvest in China, but the per capita grain production was only 786 jin. This is lower than the world average of 859 jin per capita. Nationwide, the hunger problem of 80 million agricultural workers was not completely solved. We absolutely cannot, therefore, ignore grain production. If we do, there will certainly be adverse consequences for both people's lives and the four modernizations. History provides an example of the consequences. Instabilities in grain production have caused the development of other sectors to lose their foundations. Problems involving grain are important to state planning and people's lives. At the National CPC Congress Comrade Chen Yun (7115 7189) emphatically pointed out that we must continue to emphasize grain production. He said: "Feeding and clothing 1 billion people is a major economic and political problem for China. 'No grain results in chaos' means that we should not ignore this matter." Comrade Chen Yun's speech went to the heart of the matter. Grain production must be stabilized during the reform of the rural enterprise structure. Otherwise, there will be adverse effects not only on grain production but also on diversification, and rural economic activity will be hindered.

How can we maintain and develop positive tendencies in grain production? Based upon suggestions by lower level comrades and our own views, the following measures are suggested: 1. All levels of rural cadres must fully understand that "agriculture is the foundation of China's national economy. During the reform of the rural enterprise structure we must fully implement "never ignore grain production and actively pursue diversification." We must carefully manage the relationship between the development of diversification and stabilization of grain production according to local conditions. 2. We must increase grain purchase prices appropriately and gradually correct the divergence of grain price and value so that farmers will be able to make a profit from farming. 3. We must stabilize prices for production materials and lower the cost of grain production. 4. We must perfect contract procurement methods as rapidly as possible. Two major problems currently exist in grain contract procurement. The first is late contract commitment, and the second is a matter of contract style. Contracts are drawn up as administrative orders that do not represent the principles of willingness and equal rights and obligations for both parties. They are merely a form. In order to stimulate farmers' enthusiasm for completing the terms of the contract, the following steps are required to improve contract procurement: (a) contracts should be drawn up before the planting season, in the fall of the preceding year rather than during the spring; (b) sale of production materials such as standard-priced chemical fertilizers and diesel fuel should be linked to grain procurement; (c) we should return to the old system of providing deposits for grain procurement. Cancellation of procurement deposits has had a certain effect upon the implementation of grain procurement contracts this year. We



suggest that procurement deposits should be issued again next year. A grain reserve fund could be established as in other countries. A certain portion of rural taxes and profits could be used for a grain-reserve fund to support grain production. 5. We should continue to "use industry to mend agriculture." Wherever possible, income from township enterprises should be used to provide direct subsidies for either grain production or improvement of production conditions. This income can also be used to support grain production and end the disparities among industrial, commercial, and agricultural occupations. 6. We should encourage specialization and concentration of land in the hands of farming experts. Management of grain production should be gradually expanded. We should gradually perfect the cooperative economy and provide adequate services before, during, and after production. Agricultural technology must be reformed in order to improve the economic return from grain production. We must improve grain production and provide a strong material foundation for the four modernizations of socialism in China.

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CSO: 4007/211

NATIONAL

PRC REPORTS SUCCESSES IN EXPANSION OF GRASSLANDS

OW100820 Beijing XINHUA in English 0725 GMT 10 Mar 86

[Text] Beijing, March 10 (XINHUA)--China's grasslands are expanding, a state grassland meeting here was told.

Grass was planted on about 2.4 million hectares in 1985, 30 percent more than in 1984, bringing the total planted grassland to 6.7 million hectares.

During the Sixth Five-Year Plan (1981-1985), 600,000 hectares of grassland were fenced. However, the meeting warned that about two-thirds of the existing 400 million hectares of grassland in China need further care.

In 1983, General Secretary Hu Yaobang and other Chinese leaders visited China's northwestern provinces, calling on the natives to plant grass, trees and raise cattle. Since then, the area plants grass as part of its economic plan.

In 1985, new grassland regulations were issued whereby peasants would plant grass and raise cattle under contract. The state invested 36 million yuan in planting grasslands, and another 150 million yuan were collected by local forces.

In Linxia Hui autonomous prefecture, Gansu province, 20,000 hectares of grass and 24,000 hectares of trees were planted during the past two years. As a result, livestock increased from 236,000 head in 1983 to 299,000 last year, and income from animal husbandry went up to 54 million yuan from 30 million in 1983. The annual income of every peasant has increased by 70 percent on average in the past two years.

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CSO: 4020/241

NATIONAL

BRIEFS

OFFICIALS TO SURVEY COUNTRYSIDE--Beijing, March 7 (XINHUA)--More than 300 officials, including the minister and two vice-ministers of agriculture, animal husbandry and fisheries, will check implementation of government and communist party policies in the countryside next week. A ministry representative said today the officials will make one-month visits to all of China's 27 provinces and autonomous regions. He said they will survey rural work and wheat production and see what they can do to help localities solve such problems as chemical fertilizer supply and coordinated development of the rural economy. Chinese government and communist party leaders have repeatedly stressed the importance of agriculture and grain production in statements and publications this year. In addition, the ministry announced that 60 of its officials will go to work in five counties and two cities in Jiangsu and Hubei provinces for one year. Minister He Kang said the officials must "go among the peasants, learn first-hand information and help localities solve problems directly rather than rely on reports from local officials." [Text] [Beijing XINHUA in English 1945 GMT 7 Mar 86 OW] /12858

PEASANT MARKETS FLOURISHING--Beijing, March 10 (XINHUA)--Peasant markets have flourished all over China since the state released control of many food prices last year, according to the government's Industry and Commerce Bureau. Bureau statistics show there were 61,000 peasant markets at the end of last year, compared with 48,000 in 1983. Their total turnover reached 63.2 billion yuan--38 percent more than in 1984. A bureau official said: "Since agricultural price reforms were introduced, peasant markets have been more active than ever." The quantity of goods the markets deal with is also on the increase. Last year, they handled 44 percent more edible oil than the year before, and 30 percent more pork and eggs. They also sold 40 percent of all aquatic products, eggs, mutton, beef and vegetables in urban areas, and 63 percent of chicken, duck and goose. [Text] [Beijing XINHUA in English 1035 GMT 10 Mar 86 OW] /12858

CHANGES IN CORN PRODUCTION, SALES--Corn is one of China's main items of produce for export. During last year, because of accumulated production surpluses in such areas as Yu, Ji, and Lu, the selling price in these places fell to 12-14 yuan per dan. However this year, changes have developed within the area of corn consumption. These changes began to emerge from the summer of 1985 following the increase in commercial export of the whole country, on the one hand, and, on the other hand, the development of such enterprises as animal husbandry, animal feed, textile, medicine, and chemical production. In particular, within the area of corn grown for export, demand has already exceeded supply. The wholesale price of corn in Guangzhou has also risen to 18-19 yuan per dan. According to our understanding, during 1985 the quantity of export corn has increased considerably. In August, the state export section signed a contract with Japan under which 2.5 million tons of corn will be exported to Japan, a figure that represents 10 times the total corn export of 1984. According to information from some of the corn-producing regions, less quantity will be produced during 1985 because of the accumulated production surplus of the year before. The total corn production of 1985 will, therefore, be less than the year before. Under these circumstances, by the winter of 1985, the gap between supply and demand for corn will be even wider. [Text] /Guangzhou GUANGDONG NONGMIN BAO in Chinese 8 Sep 85 p 2] 12740/7051

CSO: 4007/56

HEBEI

## METHODS OF PROCURING, SELLING COTTON AMONG COOPERATIVES

Shijiazhuang HEBEI RIBAO in Chinese 20 Sep 85 p 1

[Article by Xu Yaoquang [1776 5069 0342] and Jiao Guozhang [3542 0948 4382]:  
"The Person Responsible for the Supply and Marketing Cooperatives at the Provincial Level Discusses the Method of Procuring and Selling Cotton During the Current Year"]

[Text] According to our own dispatch, on 13 September 1985, Li Meifeng [2621 5019 1496], the provincial vice director of the supply and marketing cooperatives talked at the conference for directors of the regional, urban, and county supply and marketing cooperatives, discussing the methods for the procuring and selling of cotton for this current year.

Li Meifeng stated that the involvement of the state in cotton procurement is an important policy in the structural adjustment of rural production. Last year, 12.85 million tons of cotton were procured from our province. All marketing and supply cooperatives must carry out their fulfillment by procuring from farmers the exact quantities that had been decided among them. The amount of cotton thus procured could neither fall short of nor exceed the original agreement. In cases where slow growth or natural disasters might have led to a quantity that would fall short of the procurement level, the necessary adjustments should not be done at the local levels, between households, villages, or counties. The procurement price of cotton should adhere strictly to the "inverse 30:70 ratio" under which 30 percent of the procurement price is based on the list price, while 70 percent is at higher prices. The former practice of giving regards of grain and chemical fertilizer has also been abolished.

In the actual execution of cotton procurement, the policy of accounting on the spot must be strictly followed. All transactions must be made with the sellers. The farmers who grow the cotton should express their wishes about having payment in cash or recorded in an account. No procurer may randomly delay payment to the grower or extend it in an installment plan. Deductions from such transaction payments can only be made for agricultural taxation or accounting debit of the relevant production units.

According to an initial analysis of production figures, cotton growers will be having some surplus after they have fulfilled the procurement quota. As has been made quite clear in the Central Committee Document No 1 of 1985, "cotton growers are allowed to sell their own surplus production in the market.

Departments that deal with cotton transactions should actively regulate the market and the price will thus be stabilized." Therefore, supply and marketing cooperatives everywhere should fully utilize their positions in making the market situation known to all concerned and in offering such services as welling, transporting, and even processing the product. Farmers will thus be assisted in these ways to sell their surplus cotton production.

Our provincial government has also set the following policy which is in agreement with the principle of the document from the relevant state department: from now on, all textile factories in our province must procure their raw material from local production. In cases of insufficient quantity, inadequate quality, or species of cotton with too short a staple, then these factories may procure from production outside the province or region. However, these textile factories may not regularly either procure cotton from outside the province or directly from farmer-growers.

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HEILONGJIANG

## FUNDING PURCHASE OF FARM SIDELINE PRODUCTS DISCUSSED

Beijing NONGCUN JINRONG [RURAL FINANCE] in Chinese No 18, 16 Aug 85 pp 17-19

[Article by Heilongjiang Province Branch Bank: "Devote Major Efforts to Successfully Supplying Funds for Purchasing Agricultural Sideline Products; Gain a Clear Understanding of the New Situation, Adopt New Measures"]

[Text] We have recently organized 180 professional cadres and bank leaders at all levels and conducted a survey of the situation in the purchasing of agricultural sideline products in 15 cities and counties. Through the survey, we have acquainted ourselves with the new circumstances in the rural economy this year and the new characteristics of the purchasing of agricultural sideline products and we have mastered the new funding supply-and-demand situation for farm sideline products, thus creating conditions for successfully supplying funds.

### A. New Characteristics of The Purchasing of Agricultural Sideline Products

Crops are doing well in Heilongjiang Province this year and will produce bumper harvests; there will be bumper yields of mountain and livestock products and products from the land as well, and variety, quantity, and quality all will surpass those of previous years, so the economic situation in the rural areas is most heartening. Compared with previous years, there are principally five new characteristics in the purchasing of agricultural sideline products this year:

1. There has been an increase in market regulation. In addition to fixed-amount purchases by the state of grain, oil crops, flue-cured tobacco, livestock products, and hogs in the province this year through the market. According to statistics of the 15 cities and counties, 80 percent of the agricultural sideline product varieties were regulated through the market, and only 20 percent came under fixed-amount purchase by contract.
2. There were notable increases in products with high economic value. There were marked increases in the province this year of such relatively high-value products as soybeans, flue-cured tobacco, flax, sunflowers, castor-oil plants, edible fungus [*Auricularia auricula-judae*], honey, royal jelly and berries. According to statistics of the 15 cities and counties, there was a 15-percent increase in soybean, wheat, and paddy rice acreage over the previous year and

a corresponding decrease in area planted to corn and food grains other than wheat and rice. The area planted to sunflowers in Muleng County amounted to 25,000 mu, an increase of 39 percent over last year and there were 2 million pieces of the edible fungus, which was double that of the previous year.

3. There was a more complete selection of varieties and greater quantity. More varieties and a greater quantity of agricultural sideline products went on the market this year in Heilongjiang than in any previous year. According to statistics of the 15 cities and counties, grain yields are estimated to be 9.98 billion jin, which is a 3.7-percent increase over the previous year; flue-cured tobacco, 314,000 dan, a 53.9-percent increase over the previous year; sun-cured tobacco, 168,000 dan, a 13-fold increase; and sunflower seeds, 130 million jin, a 62.5-percent increase. In Shangzhi, Hailin and Yanshou counties, mountain grape yields amounted to 2.2 million jin, double that of the previous year; and black bean fruit [hei dou guo 7815 6258 2654], 14.3 million jin, a 1.2-fold increase. Shangzhi and Yanshou counties produced 16,000 jin of royal jelly, which was a 1.5-fold increase over the previous year.

4. There were more channels and fewer links. A free commodity market appeared in the rural areas and there were further changes in circulation channels. Not only were there purchases by state-run businesses, but there were purchases directly from the production areas as well by trade warehouses, individual small retailers, and even factory enterprises. Many households engaged in producing products, such as edible fungus, honey, medicinal materials, mountainous edible wild herbs and black bean fruit. They competed with each other for purchases and prices fluctuated widely. When the basic-level supply and marketing co-operatives purchased agricultural sideline products in the past, they relied mainly on meshing with the needs of the county-level companies, and did their marketing with those companies; there has been a reduction in these links this year, and they first found a way to market their goods through the purchasing departments, signed contracts, and made purchases, transported goods, and settled accounts directly.

5. Time was shortened and reserves were increased. The time for purchasing agricultural sideline products was shortened. First, the selling period was shortened for fixed purchases of grain on contract and berries which are difficult to take care of and which the peasants rush to be the first to harvest, transport, and sell, such as black bean fruit, mountain grapes, strawberries and du [6757] persimmons. Second, most peasants watched for the market price to go on an upward trend and waited for the right time to sell special local products which were easy to take care of, which stored well, and which were subject to negotiated purchases and sales. At the same time, because of transporting difficulties, sales were postponed and reserves increased for agricultural sideline products purchased by the commercial sector. According to statistics of the 15 cities and counties, there will be a 23-percent increase in agricultural sideline products this year over the previous year.

#### B. The New Situation in Supply and Demand of Procurement Funds for Agricultural Sideline Products

1. There was a large fund requirement and great lack thereof. According to statistics of the 15 cities and counties, there was a fund requirement of



897 million yuan for purchase of agricultural sideline products this year, which was a 20-percent increase over the previous year. However, the banks could supply only 520 million yuan in funds, which was a shortage amounting to 377 million yuan. Of the banks in the 15 cities and counties, only two had funds sufficient to balance supply and demand and the remaining 13 experienced fund shortages to differing degrees and could not satisfy the requirements for purchase of agricultural sideline products.

2. The contradiction between outlay first/revenue later is pronounced. From January to the end of June this year, loans from banks in the 15 cities and counties for grain, supply, and marketing and other commercial businesses dropped 364 million yuan, and 220 million yuan was used up in loans to agriculture, state-operated agricultural enterprises, township and town enterprises and support credit cooperatives. Since July, agricultural sideline products have gone on the market one after another, and will reach a climax in the September to November period; recovery of money from agricultural loans and loans to state-operated agricultural enterprises will be concentrated in the November and December timeframe, so the outlay first/revenue later contradiction occurs. According to statistics of the 15 cities and counties, the amount of money involved in the outlay-before-revenues due to the time difference amounts to 160 million yuan.

3. Many funds for grain loans were of a questionable nature. According to statistics of the 15 cities and counties, there was irrational fund encroachment by commercial enterprises amounting to 170 million yuan, of which irrational fund encroachment through losses incurred by grain enterprises and losses as a result of the people storing grain for the government amounted to approximately 144 million yuan, which was 15.7 percent of the total amount of grain loans. A large amount of credit funds was exhausted, which reduced the supply of funds for purchase of agricultural sideline products.

4. Work requirements were high and there was a great degree of difficulty. Restructuring the purchasing system for agricultural sideline products and changing fund-supply methods meant more and harder work for the banks. First, there were changes this year in the buying and selling patterns and circulation channel for agricultural sideline products, there was an increase in the proportion of market regulation, the scene was complicated, and it was quite difficult for the banks to get the situation with the enterprises under control. Second, many areas of the province signed fixed-amount purchase contracts with the peasants and raised the quota at each level, which surpassed the state-issued plan, so it was somewhat difficult to control the supply of funds during the purchasing period. Third, since agricultural sideline products within the plan and those subject to negotiated purchases and sales went on the market at the same time, the quantity was great and the requirements were pressing, and funds for within-plan, excess-of-plan, and market-regulated purchases were needed at the same time and it was difficult to manage them. Fourth, because of transport difficulties, reserves will increase and funds generally will be in tight supply, making it difficult to regulate and balance them.

#### C. Some Thoughts on Successfully Supplying Funds for Purchasing Agricultural Sideline Products

1. Unify thinking and increase understanding. Doing a good job of supplying

funds for purchase of agricultural sideline products and ensuring that the state plan for purchasing such products is successfully fulfilled is an important matter related to the national economy and the people's standard of living. As such, the banks at all levels must unify their thinking, increase their understanding and make clear the major significance of doing a good job of supplying funds for purchases of agricultural sideline products. This is the first year of the state's restructuring of the system of centralized and assigned procurement of farm products and we must enhance investigation and research and get a clear understanding of the new situation which has emerged following restructuring. We should adopt a positive attitude toward resolving the issue of a shortage of funds for purchasing agricultural sideline products, overcome any fear of difficulty, employ a variety of measures, expand funding sources, tap funding potential, strive for balance on our own, and devote major efforts to successfully supplying purchase funds.

2. Implement policy and uphold principles. With regard to supplying funds for purchasing agricultural sideline products, we must correctly implement state policy and uphold the principle of "dealing with each case on its merits." We must ensure the supply of funds based on actual needs for agricultural produce and farm sideline products, such as grain, oil crops, flue-cured tobacco, livestock products, and hogs, which are subject to fixed-amount purchase contracts within the state plan and purchases at state guaranteed prices. We must actively provide support by way of credit funds whenever possible for agricultural sideline products subject to contract purchases arranged by the government and management departments at all levels based on national requirements and market demand. With respect to agricultural sideline products subject to market regulation and negotiated purchases and sales, we must do what we are capable of based on the market supply-and-demand situation and according to the principles of "setting loans according to quality" and "setting loans according to sales"; we should limit the supply of credit funds for agricultural sideline products whose production is restricted by the state, in order to promote readjustment of the rural industrial structure. If the banks at all levels find there are insufficient funds for purchasing agricultural sideline products within the state plan, in addition to working hard to organize funds on their own, they should propose a loan plan in accordance with procedures and report it to higher level banks, and at the same time they should send a copy of the report to the People's Bank and grant loans only after it gives its approval; they are prohibited from granting loans first and then reporting them or reporting the loans as they are granting them.

3. Set up specialized households and earmark funds for specified purposes only. Loans used up for purchase of tobacco leaves by the food sector companies for parity purchase of grain and tobacco prior to the end of May 1985 should be transferred to specialized households for procurement of agricultural sideline products. We should implement a favorable interest rate, 0.3 percent per month, for grain loans transferred to specialized households, and a monthly rate of 0.66 percent for tobacco loans. With respect to funds for within-plan procurement, we must implement management by specialized households, earmark funds for specified purposes only, and not permit them to be diverted. If we discover that extra-plan purchases infringe upon funds for within-plan purchases, we should apply credit sanctions against the enterprises involved and ascertain where the leading responsibility lies internally.

4. Find out what the situation is and accurately settle large accounts. The situation is complicated for this year's procurement work for agricultural sideline products and there is a strong policy orientation. In order to get a pretty good idea of what's what, banks at all levels should organize manpower and go down to the grassroots units and make a detailed investigation, and find out when the peasant households are going to sell their agricultural sideline products, what varieties and how much; they should differentiate quantity changes, purchasing patterns, and circulation channels for within-plan, above-quota and market-regulated purchases, and the situation in marketing and transferring of goods to other localities. They should pay attention to both purchases and reserves, and do a good job of keeping the books on fund requirements and fund sources for within-plan, above-quota, and market-regulated purchases. They must forecast the quantity of agricultural sideline products to be purchased and fund requirements on a monthly basis, determine ways to deal with fund supplies, and set emergency measures. The enterprises should report their monthly commodity-circulation plans, funding-requirement plans for purchasing agricultural sideline products and conditions for implementing them to the banks where they have accounts, and the banks should act in accordance with the plans reported by the enterprises and balance funds month by month on a seasonal basis.

5. Secure funding and reduce disparities. In order to resolve the large shortages of procurement funds this year, we need to concentrate our efforts on securing funding. First, we must devote major efforts to raising funds. We must pay special attention to facts and details in our work, raise funds through many channels and strive to surpass assigned deposit amounts. Second, we must actively organize the recovery of loans that are due or overdue. As agricultural sideline products go on the market one after another, we must seize upon that opportune moment and promptly recover various loans that are due or are overdue; we should pay specially close attention to sorting out and recovering commercial loans employed by agriculture, state-run agricultural enterprises, township and town enterprises and support credit cooperatives, and get funds ready for purchasing agricultural sideline products. Third, we must help enterprises to better allocate and transport commodities, do a good job of settling accounts, and accelerate fund turnover. Fourth, we must carry out the "three clean-ups" and tap funding potential. We must help enterprises to pay close attention to and sort out funds of a questionable nature and enliven overly controlled money. We must supervise and urge enterprises to fix the time for returning loans which had been diverted and channel them into the credit plan. With regard to the use of various irrational funds, we must distinguish among projects and propose and plan to cut down on them and implement it at the loan units.

By employing the above-mentioned measures, according to estimates of the 15 cities and counties, the supply of funds for purchasing agricultural sideline products could be enlarged by 205 million yuan, which would reduce the shortage to 172 million yuan. Eight cities and counties, including Anda and Keshan counties, will achieve a balance of funds by their own efforts. If all the banks write articles on "enlivening" and the majority of cities and counties reduce disparities, it is possible to balance funds by our own efforts.

6. Strengthen management and do a good job of providing services. We need to enhance management in order to successfully supply funds and get the most benefit out of them. One thing we should do with respect to managing within plan procurement funds is to strictly enforce discipline and maintain rigid control, so that specialized household funds are utilized only for purchasing within-plan agricultural sideline products; we should promptly recover loans from specialized households when products are marketed. The second thing we should do, with respect to managing loans for circulation of normal commodities, is to fully utilize the funds at hand, support enterprises to get industrial goods to the market, promote rapid sales, and accelerate fund turnover; we must successfully exercise strict control over loans to commercial enterprises and those to shops run by educated youth. The third thing is that we must strengthen management of questionable funds, uphold the system of triple verification before granting loans, tap funding potential, and cut down on funds lying idle. The fourth thing we should do, with respect to the purchasing situation for agricultural sideline products and fund supply work, is to carry out analyses on a monthly basis and to handle promptly any problems which are discovered. The fifth thing is that we must put into effect the principle of voluntary participation, employ fixed-amount account transfer checks, expand the transfer and balancing of accounts for the cost of purchasing agricultural sideline products and safeguard the peasants legal interests.

7. Strengthen leadership and keep in touch with the situation in the respective areas. The work supplying funds for purchase of agricultural sideline products is a difficult assignment and it is very important that it be carried out well rather than poorly. Banks at all levels should attach primary importance to this work, give specific responsibility to a bank president and conscientiously enhance leadership. We should promptly carry out readjustment for those with insufficient industrial or commercial credit strength. Planning, credit, accounting, and cashing departments should act in close coordination, keep in touch, and work together to do a good job of supplying funds, making up deficiencies from surpluses, and settling accounts. At the same time, since fund-supply work this year is different from past years, even more should we ask for instruction and make reports, reflect the situation to the local party and government, successfully manage and give advice, and gain the serious attention and support of the party and the government.

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HENAN

AGRICULTURAL STATISTICS RELEASED

Zhengzhou HENAN RIBAO in Chinese 7 Feb '86 p 2

[Excerpts] In 1985, the social output value in rural Henan was 36.729 billion yuan, a 14.8 percent increase over 1984. The output value of rural industry, construction, commerce, and transportation was 12.575 billion yuan, an increase of 36.7 percent over 1984, its ratio of the rural social output value rose from 30.6 percent in 1984 to 34.2 percent

Calculated by 1980 constant prices, the agricultural gross output value for the year was 24.595 billion yuan, an increase of 9.9 percent over 1984. Deducting the output value of 20.002 billion yuan from village run industries, the increase was 4.4 percent over 1984. Of the gross agricultural output value, the seed industry accounted for 15.178 billion yuan, a 2.3 percent reduction; forestry accounted for 595 million yuan, a 27.1 percent increase; animal husbandry accounted for 2.984 billion yuan, an increase of 43.5 percent increase; sideline industry accounted for 5.761 billion yuan, an increase of 36.1 percent; the fishing industry accounted for 77 million yuan, an increase of 30.5 percent. Of the gross agricultural output value the proportion of forestry, animal husbandry, sideline and fishery production increased from 30.6 percent in 1984 to 38.3 percent

The area sown to grain slightly increased in 1985. Because of natural disasters and a relaxing of grain production in some areas, the gross output was 6.3 percent less than 1984.

Output of major agricultural products:

	1985 (10,000 tons)	Increase in 1985 over 1984 %
Grain	2710.55	-6.3
Summer Grain	1556.60	-7.6
Autumn Grain	1153.95	-4.5
Cotton	54.73	-37.0
Oil-bearing Crops	96.18	83.2
Tobacco	53.89	34.9
Fibre Crops	44.91	243.2
Silkworm Cocoons	0.51	19.0
Tea	0.18	-0.8
Fruit	57.39	39.9

The province afforested 162,300 hectares and quality improved; the actual area of young forests tended was 249,000 hectares, a 33.9 percent increase over 1984.

Output of major animal by-products and number of livestock:

	1985	Increase in 1985 over 1984 %
Output of Pork, Beef, and Mutton	67.47 (10,000 tons)	23.2
Milk	4.47	16.5
Sheep Wool	0.49	-20.9
Hogs Slaughtered	785.86 (10,000 head)	18.5
Pigs at Year End	1621.74	22.2
Large Animals at Year End	886.35	11.5
Sheep at Year End	661.45	-2.5
Output of Aquatic Products	6.84 (10,000 tons)	39.9

At the end of 1985, the aggregate power capacity of the province's farm machines was 15.699 billion watts, a 4.2 percent increase over 1984. The number of large and medium-sized tractors was 60,200, a 2.9 percent decrease over 1984; small capacity and walking tractors 387,100, a 23.5 percent increase; trucks 33,800, a 22.9 percent increase; and irrigation and drainage equipment 4.987 billion watts, a 8.5 percent decrease over 1984. The consumption of electricity in rural areas was 2.833 billion kwh, a 9.7 percent increase. A total of 6,627,200 tons of chemical fertilizer were applied, a 1.9 percent increase over 1984.

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HUBEI

MECHANIZATION URGED ON FAMILY-OPERATED STATE FARMS

Beijing ZHONGGUO NONGKEN [STATE FARMS AND LAND RECLAMATION] in Chinese No 11,  
24 Nov 85 pp 12-13

[Article by Wu Bin [0702 1755]: "The Role of Mechanization Should Be Fully Developed"]

[Text] In Hubei Province, some new situations and issues have arisen during the course of the development of professional, family-operated state farms engaged in commercial production.

The Problem of Concentrating Farm Land into the Ablest Hands

The gradual expansion of the scale of family operations is an inevitable outgrowth of commercial production. At present, in Hubei there are more than 6,600 professional, family-operated state farms that have reclaimed land and contracted for planting more than 100 mu in grain and more than 50 mu in cotton, raising more than 500 head of chickens or ducks, and producing more than 100 head of pigs for market. These families account for 3.9 percent of the families in Hubei engaged in land reclamation. On these professional, family-operated farms where operations are comparatively large-scale, the value of production per worker has passed 6,000 yuan, the commodity rate is more than 95 percent, and the average income per worker is more than 2,000 yuan. The economic benefits that they have reaped for themselves and the fairly large contributions that they have made to the state have attracted thousands of other families, and in so doing have helped advance the commodity economy of state farms.

However, it should be noted that there are considerable numbers of professional, family-operated state farms that have relatively large-scale operations and that are not the products of the development of the social forces of production. These are created in three kinds of situations: 1) At the beginning of the contract period, there were some portions of land for which there were no other people to whom the land could be let, so a few people took on the contracts. 2) In order to encourage the concentration of farmland into the ablest farm hands, state farms leased out on very favorable terms that portion of land upon which labor power exceeded the average. Enterprising people saw that there were profits to be made and took on the contracts. 3) In order to establish large-household models, all kinds of favorable terms were offered to families,

leading to the inappropriate concentration of a portion of farmland into the hands of a few farm families. In Qinjiang County's Yunlianghu State Farm, a survey was conducted of 43 professional, family-operated farms, which contracted for most of the land. There were only 18 households, or 41.9 percent, that had its ablest hands working on the land; there were 8 households, or 18.6 percent, that did not know how to farm; there were 10 households, or 23.3 percent, that did not have sufficient labor power to farm themselves and basically relied upon hired labor; there were 7 households, or 16.3 percent, that rented out their contracted parcels at a higher price to others who did not belong to the state farm. This problem is typical on all state farms in Hubei. From this it can be seen that encouraging the concentration of farmland in the hands of the most able and the expansion of the scale of family operations will be a long-term process. It cannot be implemented simplistically. Moreover, it cannot be implemented by applying pressure and issuing quotas stipulating that a certain number of large-scale households must be created every year. Controls must be strengthened to insure that state farmland is not rented to outsiders. Within the state farm, members who transfer land contracts must not be permitted to exceed limits set by the farm.

#### The Problem of Fully Developing Mechanization

Some state farm families that have fairly large operations have ignored agricultural mechanization. The use instead of hired labor is a fairly widespread phenomenon on state farms in Hubei. Wuhan City's Hannan Reclamation Bureau investigated the Yinlianhu State Farm and discovered the following: The farm has 24,000 mu of farmland. In 1981, it had a labor force of 1,409 persons, each person had an average of 17 mu. In 1984, the entire farm had 80 farm machines, with 2,966 horsepower, which were 25 percent and 66 percent increases, respectively, over levels in 1981, before the family-operation system was implemented. However, machines completed farm operations on 108,000 standard mu, which is 71,000 fewer standard mu than in 1981, a decline of 66 percent. Among the most important farm operations, aside from an increase in the area that is tilled by machine, the area planted by machine dropped from 43.6 percent down to 16.4. The area harvested by machine dropped from 30 percent down to 18 percent. The number of laborers engaged in farming is now 899, which is 510 fewer or 36.2 percent fewer, than in 1981. On the one hand, the standards for mechanized operations have fallen. On the other hand, the amount of labor power used in farming has declined. This has given rise to the problem of extensive hiring of labor. On this state farm, there are 555 laborers who have been hired from outside, which prevents the farm's superior conditions--extensive lands and numerous machines--from manifesting themselves. It also has produced a problem of predatory operations. And with many outside farmers coming onto the state farm, a whole set of social problems is also brought along.

The May Third State Farm's Huilongsi Production Team offers a different example. This team has 3,560 mu of farmland and 31 mu of fish ponds. These resources are contracted to 143 laborers. For the 2,800 mu of paddy fields, there are 81 contractors, each taking responsibility for 34.5 mu. The 13 agricultural machines owned by the team are contracted out to a skilled technician, under the "four standards (personnel, field area, quality, and sales



to the state) and rewards" system. Each of the five tractors serves 600 mu. Two members of the farm purchased eight tractors on their own. To encourage them to use the tractors for agriculture, not only do they receive a fee set by team regulations and paid by the user, but they also receive a supplemental subsidy of 1 yuan paid by the team for every mu tilled or harrowed. All of the 2,800 mu of paddy land has been leveled by machine; the rice has been planted in straight rows; chemical herbicides have eradicated weeds; machines harvest, winnow, and dry the grain. Every mu of rice paddy originally had required 30 workers; now it only requires 5, which can be met completely by a contracting family. With mechanized services advancing, 184 laborers have been freed from agriculture and have been developing secondary and tertiary industries and multicrop operations.

The examples of Yinlianhu State Farm and Huilongsi Team show that so long as we do a good job of providing mechanized services, we can raise the level of agricultural mechanization, and in so doing dramatically reduce the use of hired labor on professional, family-operated farms. In Hubei, there is a total of 670,000 horsepower in agricultural machines on state farms at present. There are 3,549 large and medium tractors, 279 combines, and 526 trucks. These are a tremendous resource. The present challenge is to see that the management of agricultural machine services are appropriate for the special needs of family operations. New management services must be devised to permit the superiority of mechanization to emerge. The Longganhu State Farm has some experience related to this. They established a company at the main farm and service centers at the branch farms. The company and the service centers had two levels of management. The company had centralized control over all of the farm's mechanized operations, machine and truck dispatching, personnel scheduling, the supply of materials and fuel, technical training, safety, and other matters. All of the tractors and power tools that originally had belonged to the branch farms were placed under contracts between the company and the branch service centers, except for small tractors of 20 horsepower or less that were sold off to farm members at a discount. The terms were set for 3 years. Professional, family operations on state farms were provided with technical information services and personnel training, as well as supplied with the fuel and materials that they needed.

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JIANGSU

VICE GOVERNOR URGES FARM MACHINE PRODUCTION, MANAGEMENT

Beijing ZHONGGUO NONGJIHUA BAO in Chinese 4 Nov 85 p 1

[Article by He Zexu [0149 0463 1775]: "Jiangsu Vice Governor Ling Qihong [0407 0796 7703] Suggests that Developing Farm Machine Production and Enhancing Farm Machine Management Are the Keys to Accelerating the Growth of Agricultural Mechanization"]

[Text] At the "Southern Jiangsu On-Site Conference on Zero-Tillage Mechanized Seed Drilling for Wheat, Barley, and Oats" that was held recently, Vice Governor Ling Qihong suggested that the only way to solve the current problem of an undermanned, underskilled rural agricultural labor force is to accelerate the technological transformation of agriculture and quicken the pace of agricultural mechanization. The present task in this effort is to develop farm machine production and enhance farm machine management.

Ling Qihong said that in the wake of an expanded commercial economy, agricultural mechanization must spawn a moderate degree of specialized production based on household operation. The need for agricultural modernization and mechanization grows ever more urgent in the countryside, and the demand for variety and standards grows greater and greater, but our current farm machine production falls far short of meeting the requirements of this situation. In the past few years farm machine power has increased significantly in Jiangsu. In 1984 agricultural motive power province-wide reached 21 million horsepower, an increase of 82 percent over 1978. The number of walking tractors increased from 192,000 to 440,000 in that time period, though in 1978 walking tractors worked 102 mu of cropland per horsepower and by 1984 that figure had dropped to 33 mu per horsepower. One major reason for this phenomenon is the low proportion of comprehensive farm implements. Many rural cadres and farmers have complained to us because suitable sets of farm implements have been unavailable for them to buy. This situation cannot help but be of concern. Consequently, we must progressively shift our emphasis in farm machine production away from the effort to raise the total quantity of motive power, and instead stress various comprehensive sets of farm implements. We must accelerate production of farm implements and improve the completeness rate of tractors. We must especially produce more seed drills, trench diggers and processing machinery for farm sideline products.

Ling Qihong suggested that the farm machinery sector should enhance its management, maintenance, and technical training on existing farm machinery in order to improve the proportion preserved in good condition. It must organize the various specialized farm machine teams and households to do a good job in agricultural services. All tractors originally possessed by collectives, whether they were paid for by households at a reduced rate or whether they were contracted to households, must assume a certain part of the job of working cropland. Tractors possessed and operated by households must also shoulder the task of working farmland. Village farm machine management stations (or teams) must actively organize households that have and do not have machinery to sign work contracts and put into effect cropland work assignments and fee collection standards. In the future we must actively promote rural collective or jointly initiated farm machine service industries.

12510

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NEI MONGGOL

ACHIEVEMENTS OF STATE FARMS DURING REFORMS NOTED

Hohhot NEIMENGGU RIBAO in Chinese 19 Aug 85 p 1

[Article: "State-Run Agricultural and Livestock Farms Prosper Throughout Region During Reforms"]

[Text] The spring breeze of reform has been felt in the state-run agricultural and livestock farm system in Nei Monggol. Throughout the autonomous region 120 state-run agricultural and livestock farms keenly anticipated reform, abandoned many years of following a rigid pattern for running the farms and widely implemented the system of contracting responsibility. More than 53,700 worker household agricultural and livestock farms, have been set up to date and the agricultural and livestock farms have basically been brought under family management.

In the past, the state-run agricultural and livestock farms throughout the region depended on state planning for production, depended on state-supplied goods and materials, depended on state investment for construction and depended on state subsidies to cover losses; moreover, the enterprise leaders and workers did not assume economic responsibility for management. This economic system where the staff and workers ate from the "large pot" of the enterprise, and the enterprise ate from the "large pot" of the state seriously impeded development of the agricultural and livestock farm economy. The accumulative total of losses before 1982 from the 120 agricultural and livestock farms throughout the autonomous region amounted to more than 700 million yuan. Following the 3d Plenum of the 11th CPC central Committee, the agricultural and livestock farm system regionwide universally implemented a restructuring of the economic system, overcame "leftist" influences, groped its way through, started by implementing a system wherein workers contract for economic responsibility and successively underwent several stages of economic reform, such as giving incentive awards on top of basic wages, distributing net profits, paying wages based on output, assigning responsibility on a large scale and setting up family-run agricultural (livestock) farms for the workers. We took five large steps in 5 years: from 1981 to 1982 there was an average annual deficit of nearly 20 million yuan; in 1983 we turned deficits to surpluses for the system as a whole and removed the stigma of suffering losses for 16 consecutive years; in 1984, although some districts suffered natural disasters, gross output value of industry, agriculture and animal husbandry for the system as a whole still increased 3 percent over 1983; in 1985 the livestock industry

systemwide had experienced bumper returns and for agriculture, with the exception of individual districts which were afflicted with a drought, the crops in the great majority of districts did well. It is estimated that the system as a whole could well achieve the profit target of the 1985 plan. The state-run agricultural and livestock farms throughout the autonomous region mainly paid special attention to six things during reforms:

1. They restructured the management organization and changed administration and management to serve the enterprises. They devoted major efforts to simplifying the management organization and reduced management (and technical) offices (sections) at the autonomous region, league city and farm levels by 40 to 70 percent. The Dayangshu Bureau abolished the production team-level organization, established family-run farm management districts and reduced management personnel by 900; simultaneously, various bureaus implemented basic reforms administratively. By the first half of 1984, nine bureaus at the league city level had organized and established joint agricultural-industrial-commercial corporations, launched work pertaining to the business of purchasing, processing and marketing farm sideline and livestock products and have brought agriculture, industry and commerce under comprehensive management. In 1984 and 1985, the vast majority of farms throughout the autonomous region set up service companies to supply pesticides, chemical fertilizers, improved varieties and information to contract households and family-run agricultural and livestock farms.
2. They implemented a responsibility system and a system for advertising job vacancies. Farm managers operated in an economic responsibility system where they assumed responsibility for profits and losses for the whole farm, and qualified units, with the consent of higher authorities, could themselves select their deputies, associated cadres and management personnel. Suolun [4792 0243] livestock farm in Hinggan League implemented the farm manager responsibility system in 1984 and changed the leadership system where the party and government were combined and where everybody had authority but no one had responsibility. The farm manager boldly utilized his talents and that year made up a 390,000 yuan deficit and realized a profit of 100,000 yuan.
3. They readjusted economic policy and extended production management authority and financial authority. They provided the state-run agricultural and livestock farms, contract households and family-run agricultural (livestock) farms with ample production management authority, and as long as they guaranteed to fulfill grain, oil crop and livestock product assignments, the managers could arrange production and dispose of the products of their own accord. Under the principle of the state comes first, following by the enterprise and then the individual, the enterprise had the authority to allocate funds for full support and maintenance and to retain surplus profits, and thereby enhanced the vitality of the enterprise internally.
4. They implemented diverse forms of ownership. In the wake of implementing the system of assigning responsibility for tasks and setting up family-run agricultural (livestock) farms, changes occurred in the production organization, economic structure and distribution forms within the farms, and they began to develop from contracting for or leasing some of the means of production for the workers to use to appraising and returning them to the households.

At the present time, the vast majority of agricultural and livestock farms have already appraised such means of production in agriculture and animal husbandry as implements, livestock, forests and small-sized production facilities and returned them to the workers. Means of production such as land, grass and livestock farms, a portion of large farm implements, relatively large buildings used for production and water conservancy facilities were returned to ownership by the whole people.

5. They implemented the principle of distribution according to work and restructured the wage system. This work was carried out in synchrony with pursuing an economic responsibility system, and as contracting became more pervasive, wage fluctuations became greater. As we entered 1984, in the wake of turning agricultural and livestock farms over to families to run, we changed the three wage scales of the past and implemented a completely floating wage system. With this form of wage distribution where a quota is turned over to higher authorities and one is responsible for his own profits and losses, it is possible to bring the workers' initiative into full play.

6. They changed the organizational work style and enhanced guidance and services. Beginning in 1984 management bureaus at the autonomous region and league city levels changed the organizational work style of the past, which was to issue orders; personnel in the administrative organs devoted their main energies toward thoroughgoing grass-roots level investigation and research, provided the leaders with ideas for making policy decisions regarding reforms and economic construction and supplied the workers with management measures and information sources. Of the 68 cadres in the regional bureau last year, 49 of them spent more than 1,100 days on farms carrying out investigations. They organized another five investigation and research teams in May this year, which went to various farms and got deeply involved in readjusting the industrial structure and guiding the work of improving and perfecting the family-run agricultural (livestock) farms.

12513

CSO: 4007/62

NEI MONGGOL

# ISSUES INVOLVED IN READJUSTING PLANTING STRUCTURE DISCUSSED

Hohhot NEIMENGGU RIBAO in Chinese 19 Aug 85 p 4

[Article by Niu Chenguyan [3662 4453 6678]: "Several Issues Which Should Be Attended to in Readjusting the Planting Structure"]

[Text] Through 5 years of success in restructuring the economic system, a new situation is now at hand in the broad rural areas of the Nei Monggol Autonomous Region, namely, comprehensive readjustment of the rural industrial structure. This new situation requires the people to break completely with their former traditional thinking and understanding in favor of the keen minds characteristic of commodity managers, proceed from market requirements, readjust the irrational portions of the rural industrial structure, and have production in the countryside develop in a healthy manner in the direction of commodity production, fine-quality products, product diversification, and construction seriation. With respect to readjusting the rural planting structure, we must not merely think in terms of readjusting the internal planting structure alone, rather we must proceed by coordinating it with the livestock and food-processing industries and market circulation. A rational planting structure will bring the best comprehensive benefits, namely, economic, social, and ecological benefits. An important principle to keep in mind in readjusting the planting structure is to do our best to integrate those three benefits; we must not overemphasize any one of them at the expense of the others. Several issues to which attention must be paid in readjusting the planting structure are discussed below.

1. In readjusting the planting structure, at the same time as the all-around implementation of the construction policy of "focusing on forestry and animal husbandry, and economic diversification," there must by no means be a relaxing of grain production, and we must maintain the momentum of sustained development. Relatively large successes have been achieved in grain production in the autonomous region in recent years, but a sober look reveals that grain production in Nei Monggol is lower than the national average and that there are fairly wide fluctuations in the yearly gross output. For this reason, it is necessary for all areas that are suited to expanding grain production to continue to successfully carry on grain production and try hard to raise the grain self-sufficiency level throughout the autonomous region. Beginning this year, the system of centralized procurement of grain will be abolished and will be replaced by contracting for fixed purchases. The grain

varieties in the autonomous region for which fixed purchases apply include wheat, corn, paddy and the soybeans of the four eastern leagues (cities); other grain varieties will follow the market. Oil-crop varieties subject to fixed purchases include oil-type sunflowers, flax, and rapeseed. These will be unrestrained buying and selling of the oil-crop varieties withdrawn from centralized procurement, following the market. Based on the provisions of the policy outlined above, the various localities may carry out readjustment of wheat, corn and paddy crops in accordance with the fixed-purchase contracts signed with the state, the purchasing contracts signed with grain management, processing, and consuming units, and comprehensive consideration of the people's livelihood and market requirements. They may implement diverse approaches to handling grain withdrawn from centralized and assigned procurement and grain varieties for which there is self-sufficiency or customary use, such as Chinese sorghum, naked oats, corn millet [mei gu 4745 6253], and potatoes. During readjustment they must pay attention to economic information and market sales.

2. We must maintain the appropriate ratio of grain crops to industrial crops. Since the 3d Plenum of the 11 CPC Central Committee the various localities throughout the autonomous region have taken vigorous action to readjust the planting structure, to change the approach of carrying on grain production alone, to bring the strengths of the region into play and to expand industrial crop acreage; all these played a large role in fulfilling social needs, enlivening the rural economy and increasing peasant income. What is important to note is that at the present time there is an excessive tendency to pursue economic benefits alone by planting industrial crops, such as sunflowers, in some areas where climatic and soil conditions are suitable for growing both grain and industrial crops. When readjusting the planting structure, we must keep to a certain ratio of grain and industrial crops. Where the situation and conditions of various localities are different, the ratio will be different as well. Thus beet and oil-type sunflowers must be planned as a whole and arranged under the guidance of the state plan and in accordance with fixed-purchase contracts, and comprehensive consideration must be given to economic, social, and ecological benefits. We must not, under any circumstances, again engage in "planting whatever brings in the most money." Blindly expanding industrial crops does not benefit the state and helps the peasants even less.

3. Based on market demand, bring into play local natural resources and social, economic, and technical strengths and devote major efforts to producing well-known, exceptional, rare, superior, and new farm sideline products. Nei Monggol encompasses a vast territory and has abundant resources; each of the various localities has its own superior crops and farm products which enjoy a great reputation, such as buckwheat, small red beans, mung beans, brewing barley, Heteo, honey melon, and traditional Chinese medicinal materials. We must base the production of these well-known, exceptional, and rare crops within the autonomous region, keep in view the country as a whole and do all we can to move in the direction of marketing abroad. We must readjust the planted area in accordance with market demand within and outside the autonomous region as well as such aspects as the labor force technical conditions, crop rotation requirements, and ecological benefits.



4. Vigorously expand forage grass, fodder and green-manure crop acreage and form a grain/industrial crop/forage grass, fodder, green manure rational planting structure step by step. The first step here is to bring about a fine cycle within the planting industry and further bring rational transformation and circulation to the ecological system to ensure steady and continued increases in agricultural production. Of course we must suit measures to local conditions in selecting which varieties to grow, and we must strengthen cultivation management and fully utilize forage grasses and fodder to expand the livestock industry.

5. Pay attention to improving varieties and raising product quality. One of the various inharmonious phenomena present in the process of converting rural industry to a commodity economy is that agricultural production is ill-adapted to the requirements of market consumption; this is principally manifested in the low quality of certain farm products and an incomplete selection of varieties. For this reason, when readjusting the planting structure we also must see to it that importance is given to improving crop varieties and raising their quality. The advantages of this are readily apparent: first, it could directly increase peasant income; second, the products would be competitive and it would be easy to open up the market. We must use good methods to preserve the fine properties of introduced and popularized good varieties. We also must pay attention to issues such as product processing, storage, and transport to avoid unnecessary loss and waste.

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NEI MONGGOL

## INCREASE IN AREA AFFORESTED BY AIR

Hohhot NEIMENGGU RIBAO in Chinese 9 Sep 85 p 1

[Article: "New Breakthrough for Aerial Planting of Forage Grass in Nei Monggol This Year; Regionwide Aerial Planting Amounts to 1,431,800 Mu, Sets Record for Greatest Acreage Sown by Air in One Year"]

[Text] This year's aerial planting of forage grass in Nei Monggol Autonomous Region has been concluded successfully. According to figures as of 20 July, the area planted to forage grass by air for the autonomous region as a whole amounted to 1,431,800 mu, which was 161,800 mu greater than the same period last year and which was 81 percent above the planned quota.

The aerial planting of forage grass in Nei Monggol this year was the first year of turning to the demonstration stage for planting by air following experimenting with aerial planting the previous 6 years. Viewed in terms of the aerial planting situation for the autonomous region as a whole, this was a year of simultaneous development of quantity and quality, synchronous and developmental advances, and some reforms. The characteristics are as follows:

1. There was consolidation of old planting districts, opening up new planting districts, consideration given to livestock and farming districts, and gradual expansion toward agricultural districts. In order to expand the aerial planting demonstration areas, planting by air was undertaken this year to actively open up new planting districts at the same time as maintaining the old planting districts, and of the six aerial planting points newly added this year, half were farming districts. Most of the farming districts planted by air were lands withdrawn from cultivation and abandoned waste and selected after readjusting the rural industrial structure. Labor was plentiful and we took advantage of that to promptly fill in the gaps by planting manually those areas where it was difficult to plant by air, such as leftover bits of land, gullies and valleys and land missed during planting. The area sporting seedlings this same year amounted to more than 90 percent.

2. Aerial planting was integrated with helping the poor. In order to have the funds for aerial planting bring great benefits and adhere to the principle that outlay must be complete, the focus of consideration was the outlying livestock districts, mountainous districts and old districts, to change as quickly as possible the backward nature and impoverished circumstances of these areas.

At the same time, the farmers and herdsmen in these areas were highly enthusiastic in their requests for aerial planting; they pooled funds on their own initiative from banners (counties) to sum (villages), encircled grass farms on which degeneration and desertification were severe, and did a good job of all preparatory work prior to aerial seeding.

3. People assumed responsibility for tasks assigned by the state and gradually brought about the simultaneous development of the state, the collective and the individual. A large amount of grass farm acreage in Nei Monggol was suffering from degeneration and desertification and an area of about 200 million mu urgently awaited aerial planting. In order to resolve the problem of funding this year, in addition to continued investment by the state, they also adopted diverse approaches on multiple levels to raise funds, fully aroused the initiative of the various parties involved and thereby ensured the successful completion of this year's aerial planting task.

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NEI MONGGOL

# INVESTMENT TO DEVELOP GRASSLAND PROVES WORTHWHILE

Beijing NONGMIN RIBAO in Chinese 2 Oct 85 p 2

[Article: "Nei Monggol Herdsmen Invest 100 Million Yuan To Set Up Grasslands; Change Concept of Emphasizing Livestock at Expense of Grasslands, Gradually Move in Direction of Building Up Stock-Raising"]

[Text] The broad masses of herdsmen in the livestock districts of Nei Monggol last year raised 100 million yuan themselves and carried out grassland construction, and began to move gradually from depending on heaven in raising livestock toward building up stock-raising.

Since implementing the "grasslands-livestock dual contract system," in the livestock districts of Nei Monggol, the herdsmen have gradually changed their traditional mentality of overemphasizing livestock and paying less attention to grasslands, and have broken down the practice of merely exploiting grasslands rather than building them up, and merely taking from them without putting anything into them in return. They began to change from concentrating only on secondary production to concentrating on primary production, adhered to the principle of simultaneously promoting the household, combined household, collective, and the state, and focused on setting up manmade pastures for livestock herds. A great upsurge appeared in constructing grasslands through all-round construction of manmade pastures, banking the sands to grow grass, planting grass artificially and bringing about a fully complement of water, grass, forests, and machinery; the herdsmen gradually embarked on the new road of conscious construction, constructing with high standards and integrating planting and stock raising.

The herdsmen of Uxin Banner adhered to concentrating on small scale and practicality in constructing stock-raising households and manmade pastures for stock herds and set up four types of grasslands based on stock-raising requirements; namely, hay fields, rotation grazing pastures, close sandy areas to raise grass and pastures formed through economic diversification. Funds raised by the herdsmen themselves accounted for one-third of the total of 22.5 million yuan invested in construction of grasslands through the banner last year. Bairin Right Banner relied mainly on herdsmen investing in construction to complement state support; in recent years they have constructed 1.01 million mu of family grasslands, which accounted for 17.9 percent of total grassland area throughout the banner. Development in Urad Rear Banner

centered on water, and grass and livestock farms which focused mainly on all-round construction of pastures and planting trees and grass have basically been set up; the state, collectives and individuals invested jointly and set up 9 small-scale water reservoirs, 9 seepage piping projects, 36 canals for channeling water and 5 projects for blocking subterranean drainage. As a result, fodder area for the banner as a whole increase five fold, the area from the network of surrounding dams and dikes amounted to more than 130,000 mu and artificially created grasslands for livestock herds increased from 86 in number to 206.

The emergence of an upsurge in grassland construction is just now changing the ecology and environment of the grasslands and livestock production throughout the autonomous region. In the Ordos grasslands of Ih Ju Meng League, where there is an extremely serious problem of grassland being lost to sand, the masses relied mainly on regeneration through their own efforts, with investment by the state playing a secondary role. They devoted major efforts to activities related to planting grass, trees and ningtiao [2899 2742]; at the same time, they engaged in aerial sowing on a large scale, so the area lost to sand dropped from 80 percent in 1977 to 40 percent last year, and the area in forests, grass, and vegetation increased from 36 percent to approximately 60 percent, which was the first step in changing the impact on animal husbandry on losing grasslands to sand.

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NEI MONGGOL

DEVELOPMENT OF FISHERY DISCUSSED, ADVOCATED

Hohhot NEIMENGGU RIBAO in Chinese 23 Sep 85 p 4

[Article by Cheng We [2052 2976]: "Everyone Must Pay Great Attention to Expanding Fishery Production"]

[Text] Fish is fine-quality food which is high in protein, low in fat and low in cholesterol, and assumes a role not to be ignored in enhancing the people's health and increasing mental capacity. In readjusting the rural industrial structure, fully exploiting fishery water resources and speeding up development of fishery production is an extremely pressing task and one which should arouse a high degree of attention.

I. Fishery Potential Is Immense

Nei Monggol has 9.1 million mu of fishery water areas as lakes and reservoirs, and more than 10 million mu of low-lying land and saline-alkali sands which could be opened up and utilized for fish farming. Nei Monggol is in the forefront among its brother provinces and autonomous regions in water area for freshwater fishery, and is first in area per capita (with the exception of Xizang, which has yet to be opened up and exploited).

Fishery development in Nei Monggol has been halting and slow for many years. The pace has speeded up since the 3d Plenum of the 11 CPC Central Committee but the annual rate of increase has been only 6.7 percent, average per-mu output is only 5.3 jin and we have yet to reach the highest yearly output on record. During the same period, the annual increase in grain and pulses in Nei Monggol has been greater than 10 percent and the annual increase in freshwater fish nationwide has been 16.1 percent; in Heilongjiang Province, with atmospheric temperatures similar to those in Nei Monggol, the annual increase in fish output has been 28 percent and average per-mu output has been more than 20 jin.

To this day, fish has been the foodstuff in tightest supply among the various foods. The price of fish is higher than its value and money and labor have been invested alike so earnings from fishery should be higher than for the various interrelated industries. Therefore, the present is indeed an opportune moment to tap the potential for fishery production.

## II. Devote Major Efforts to Developing Aquatics Breeding and Fishery

The pattern for fishery production is the same as that for agriculture, from gathering to planting, and the same as that for animal husbandry, from hunting to breeding; the inevitable trend in the development of fishery production is from fishing for natural fish to artificial breeding of fish. We have basically completed this historical process nationwide for freshwater fish; artificially bred fish account for 80 percent of total output. We have not yet finished in Nei Monggol, where artificially bred fish account for only 23 percent of total output and breeding is extensive rather than intensive.

Fishery waters can be exploited in three dimensions; they are superior to fields and grasslands, which can only be exploited in a two-dimensional plane. Different types of fish and aquatic plants and animals grow and dwell in different water levels, so we can breed, gather and catch aquatics in the upper, middle and lower water levels at the same time. Fish are coldblooded animals; their energy consumption is low and they have a higher feed to meat conversion ratio than livestock and poultry. Feed to meat ratios are: cattle, 7 to 1; hogs, 4 to 1; chicken eggs, 2.5 to 1; fish, 2 to 1.

Developing intensive fish-farming ponds is an undertaking where investment is low, expansion is rapid and return is high.

As for repairing, maintaining and exploiting small ponds, low-lying land, and saline-alkali sands, once they are set up as intensive growing ponds, as long as the basics, such as water, seed and bait are reliable, by investing labor and technology a return can be realized that same year and the fishpond can be utilized in a cycle of 10-plus or several tens of years.

Fishing for natural fish in the large water areas, which are mainly managed by state-run fisheries, results in resource protection not receiving proper coordination from various circles, to the point where fish resources are reduced and quality is lowered. The state-run Ulansuhai Nur fishery contracted with households to carry out intensive growing on river bends, forks in lakes, and fish-farming ponds. Contracting for the management of a predetermined water area, contracting for output from a fixed screened-off area and contracting for profits from set costs has resulted in brilliant achievement in resource protection and economic return. Hubei Province has passed on fine experiences: by adopting such approaches as fish farming using nets and traps, and raising fish in pens and enclosures it has divided the "large" into "small," and replaced "large" with "small," "extensive" with "intensive," and "inferior" with superior" and achieved the goal of "increasing aquatics growing near and far." State-run fishery is the guiding force and rests on a fine foundation; we definitely must, as quickly as possible and by suiting measures to local conditions, achieve success in the highly difficult project of fish farming in large water areas.

## III. Objective of the Struggle

A most heartening target to strive for was proposed in the first half of this year at the aquatics work conference for the entire autonomous region: to

increase fresh-fish output 16 times from a base of 22.7 million jin in 1980 to 363 million jin by the end of this century. This will be divided into two steps: the first step, from 1985 to 1990 is for annual fresh-fish output to reach 100 million jin, which is an annual average increase of 20.9 percent. Included in this will be the managing and exploiting of 7 million jin of natural water areas, with an average per-mu output of 10 jin, and developing 300,000 mu of intensive growing ponds, with an annual average per mu output of 100 jin. The second step, from 1991 to 2000, is to make the rural economic structure and the internal structure of fishery basically rational through readjustment, to popularize and to improve fish-farming techniques, and to realize a certain accumulation of funds. This will result in rapid development where there will be 23-percent annual increase in artificial and intensive fish farming.

#### IV. Several Measures

First, relax policy and encourage the development of fish farming. Uphold the guiding principle of simultaneously promoting the state-run, collective, and individual. We must assign waste water which is suitable for fish farming, saline-alkali and waterlogged lowlands which can be reclaimed, the banks of former river courses, abandoned canals, etc., to the masses to develop fish farming, just as family plots and mountain plots were assigned, and issue permits. Mobilize and support social groups, have industrial enterprises pool funds and labor, and supply techniques to develop fish farming. Open up to the outside and welcome the various provinces and municipalities in the interior to come to Nei Monggol to invest funds and technology to develop fish farming, lengthen the terms of contracts for developing fish farming and permit inheriting and compensable transfer of possession. The aquatics management organization should set up special groups and exploit investigation and research work in this respect.

Second, rigorously protect fishery resources. Fishery waters resources and aquatic plant and animal resources are important subjects of labor in fishery production. The relevant regions and sectors must conscientiously implement policy decrees for protecting fishery resources, improve fishery management and administrative structure and uphold its right to enforce the law; earnestly resolve in a satisfactory manner the economic benefits for the masses surrounding the fishing districts, arouse the masses' consciousness with respect to protecting fishery resources; protect the rights and interests of fishery management units and fishery producers in delimiting waters. State cadres, staff, and workers who instigate or support the destruction of fishery resources must be punished through administrative discipline and even legal sanctions as required.

Third, construct a sound foundation. The fishery foundation in Nei Monggol is weak and to have a fishery play its proper role in the national economy we need to construct the foundation in a down-to-earth manner. First, proceeding from the existing fishery divisions, we must further investigate resources which can be reclaimed and developed, especially mid-sized and small water areas, usable low-lying land and saline-alkali sand areas and sites, to map out a development program and provide a reliable foundation. All the



districts to be reclaimed for fish farming must have reliable water resources, sufficient amounts of water, water quality suited to fish farming, adequate water in drought years and yet which will not flood during wet years. Secondly, we must bring to a close as quickly as possible the practice of purchasing fingerlings from the Chang Jiang for fish farming and stand on our own to revive and expand our own fingerling production.

Lastly, training specialists and increasing technical and management quality is a major program of fundamental importance over the long term for ensuring the steady expansion of fishery production. Approaches which we already have implemented or which we should start are: all of the existing agricultural colleges, polytechnic schools, and institutes and schools run by the local people which have the prerequisites, or for which the proper conditions can be brought about, should offer aquatics as specialized subject or class; value and take good care of existing technical and management personnel and full capitalize on what they have to offer. Encourage all those who have the ability, to undertake the task of training people, or have one person lead groups or teams of apprentices, and provide cash subsidies for excellence; invite specialists from other provinces to come to Nei Monggol to teach and invite master workers to come to train apprentices, with remuneration based on excellence; send students to other provinces to study techniques or management; set up technical and economic popularization centers in the centralized fishing districts, where those run by the state, by the local people, and through public bidding are all acceptable, and provide essential support at the startup stage.

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NEI MONGGOL

ISSUES IN PURCHASING, SELLING BEETS RESOLVED

Hohhot NEIMENGGU RIBAO in Chinese 9 Sep 85 p 1

[Article: Nei Monggol Western Region Experiences Bumper Beet Harvest; Autonomous Region Economic Committee Actively Resolves Beet Purchase, Sales, Handling, Transport Issues"]

[Text] As a result of greater beet harvests, we must earnestly implement fixed-amount purchase contracts for beets to guarantee purchases; to increase purchases as much as possible for beets not under contract we must do a good job of transporting and handling them and appropriately extend the extraction period. These are the requirements proposed for the various districts by the autonomous region economic committee at its recently convened western region beet purchase, transport and processing work conference.

Beets are one of the major cash crops in the western region of Nei Monggol and are an important source of income in the peasant economy. This year, as a result of conscientiously implementing the spirit of Central Committee Document No 1 and actively readjusting the agricultural production structure, there was a relatively large expansion in area planted to beets. Under the guidance of the scientific research departments the broad masses of peasants carried out scientific planting and improved cultivation techniques, which increased the output of beets. The area devoted to keeping a full stand of seedlings in the western region this year amounted to 840,000 mu, which was an increase of 370,000 mu over last year and gross output totaled 1,534,000 tons. The increase in beet output exceeded the processing capacity of the sugar mills and this year there were 154,000 tons of beets that could not be processed; this was the first instance of beet surpluses in the western region, especially in the area of Bayannur League.

Through discussion at the conference, the various sugar mills in the western region decided to advance the date that they would go into operation, to increase their handling capacity and to extend the processing period so the gross amount of beets processed amounted to 1,379,000 tons, which was a 19.8 percent increase over the rational processing capacity and 79,000 tons greater than the amount contracted for, or a 6-percent increase. Purchase by the various sugar mills was guaranteed for the beets covered by fixed-amount purchase contracts, and as many beets as possible which were not under contract

were purchased at negotiated prices, which ensured that the fruits of the peasants' bumper harvests were truly converted to wealth and every means possible was employed to lessen peasant losses. The various sugar mills decided to move up training for their purchasing personnel, to implement rigorously a purchasing standard of pricing according to quality, to strictly prohibit such phenomena as holding down prices by lower the grades, docking excessively and refusing to purchase without cause. They improved their attitude toward services and conscientiously resolved the issue of the peasants' beet selling difficulties. As for the beets which could not be purchased this year, the conference recommended that the broad masses of peasants implement storage and preservation, in addition to digesting some on their own, and the sugar mills would continue purchasing next spring those beets which had not frozen or rotted. In order to encourage the various sugar mills to process more beets, the autonomous region people's government decided to expand the proportion of products which could be sold on their own initiative, and to abolish standard transport certification procedures so the various sugar mills, in addition to fulfilling the commercial purchasing plan, could sell the excess portion on their own.

In light of the situation this year where there was a large quantity of beets and sunflowers seeds to be transported, and where time was pressing and the task was hard, representatives of the Hulun Buir League Railroad Bureau who attended the conference quickly formulated a transport program and implemented it at the various stations and farm commodity locations. They have guaranteed more, fast and timely transport, and before the end of next February will transport by rail 445,000 tons of beets to the various sugar mills in a balanced manner and will work hard to finish ahead of schedule.

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SHANGHAI

GREATER ROLE FOR FREE MARKETS IN VEGETABLE DISTRIBUTION URGED

Shanghai SHANGHAI JINGJI [SHANGHAI ECONOMICS] in Chinese No 2, 15 Apr 85  
pp 18-19

[Article by Shi Leifeng [2457 7191 1496] of the Shanghai Academy of Social Sciences: "How To Improve the Vegetable Purchase and Marketing System in Shanghai"]

[Text] Since the 3d Plenum of the 11th CPC Central Committee, the production and supply of vegetables in Shanghai has improved. During the past 5 years, neighboring counties have annually supplied the municipality with an average of more than 24 million dan of vegetables. Of this total, 4 to 5 million dan are processed and shipped out, supplying residents in nearby counties and towns and localities farther off. An average of 50,000 to 60,000 dan of vegetables are sold at markets every day in Shanghai Municipality; each person consumes an average of 350 to 400 grams each day. The supply of vegetables to the city's residents has achieved stability, retail prices are fundamentally steady, and the overall production and marketing outlook appears to be improving. However, other problems have not yet been fundamentally solved, such as the lack of variety, a decline in quality, and imbalances in the supplies brought to market. Two particularly pressing problems concern waste and the state subsidy that is increasing annually. According to statistics, in recent years the vegetables that Shanghai Municipality has purchased wholesale for resale have accounted for 20 to 30 percent of the total amount sold in the city markets. Such large quantities of purchases for resale create very serious losses for the state. In 1983, the subsidy totaled 45.8 million yuan, an increase of 3.45-fold over the 1976 level of 10.09 million yuan. Many factors have contributed to the above-mentioned problem. Production conditions are not good, technical standards are low, protection against disasters is weak, operations and infrastructure are backward, and there are other contributing reasons. But a very important reason is that the system of centralized procurement and sales for vegetables is not well matched to the present situation in which the urban and rural economies are undergoing change.

The vegetable purchase and marketing system that is used in Shanghai is as follows: the state sets the purchase prices and market prices for vegetables, and vegetables produced in the neighboring counties are centrally purchased and sold by the state vegetable company. When production exceeds quotas, or

when purchases exceed quotas, then the vegetables are supplied to urban residents according to a plan. Other enterprises or individuals do not have the power to engage in these operations. The state has complete financial responsibility for the state vegetable company and provides financial subsidies for losses incurred during operations.

The principal drawbacks to this kind of system are as follows:

1. Production and consumption are poorly matched. The production and sales planning is a meaningless formality. Under the system of "centralized control over everything," production departments have no need to pay attention to the market or to worry about vegetables remaining unsold. When production arrangements are made, frequently only the quantity and the value of production and the size of profits receive attention. Variety and quality are overlooked, giving rise to monotony in the variety of vegetables offered, a decline in quality, poorly timed deliveries to market, and serious losses due to waste. Although the production units and the commercial units frequently sign production and marketing contracts which stress planned planting and market deliveries, the plan are not made carefully or lack concrete measures. With so many varieties of vegetables, with complicated crop rotations to consider, with production damaged by natural disasters, and with market needs frequently in a state of flux, it is frequently very difficult to meet the planned production objectives.
2. The power to control prices is excessively centralized, which is not appropriate to the unique characteristics of vegetable-production operations. Excessive centralization of control over prices undercuts the role that prices can play as a lever in adjusting production and in balancing supply and demand. There is no way to permit price differences for variety, quality, or season, which in turn means there are fewer incentives for the producers.
3. The vegetable company eats financial subsidies from "the iron rice bowl," and vegetable-producing farmers eat "from the iron rice bowl" in centralized purchasing and marketing. The centralized system of purchase and marketing deprives vegetable-producing units of the vitality that they should have. Everyone eats the state's financial resources in "the iron rice bowl." Financial subsidies confuse policy problems with operational losses and obscure both the waste found in operations and the backwardness of enterprise management.
4. Production, distribution, and sales are separate administrative systems. The present systems of vegetable management are separated according to administrative departments. The agriculture bureaus oversee production; the commercial bureaus oversee markets; the price control bureaus oversee prices, the financial bureaus oversee the subsidies; local governments oversee retail vegetable markets. This kind of multiheaded leadership and complicated administrative management system separates responsibility, power, and interests. Those with responsibility have no power; those with power have no responsibility. Thus, it is difficult to thoroughly implement a responsibility system.

The centralized purchase and marketing system for vegetables must be reformed in order to hasten the expansion of vegetable production, to meet the vegetable consumption needs of urban residents, and to gradually reduce the financial subsidy burden shouldered by the state. The guiding principles for the reform should be the following: under the guidance of the state plan; the scope of market adjustments should be gradually expanded, fully permitting the law of value to play its proper role. Enterprise autonomy should be expanded. A grid for distribution of vegetables should be established, taking state commerce as the leading guide, and using various kinds of economic forms, operational forms, and paths of circulation to open up markets and reduce layers of bureaucracy. Concretely, the reforms should do the following:

1. The system of state vegetable purchases should be gradually eliminated. For the important kinds of vegetables, such as greens, cabbage, Chinese cabbage, winter melon, and others, the present policy of planned purchases should be continued. The state's vegetable-purchasing agencies should sign purchase contracts with vegetable production units or individuals. Based on demand, the vegetable producers should sell to the vegetable-purchase agencies according to vegetable variety, quantity, quality, time of delivery, and planned price. The state's wholesale-purchasing agencies should supply the vegetables to retail vegetable markets in proportion to the local population. The state should continue to sell the items within the purchase plan at a subsidized price. For those items outside of the purchase plan, producers should be permitted to use many channels of free marketing, and state agencies responsible for vegetable distribution should be responsible for protecting purchase prices. For vegetable varieties other than those mentioned above, there should be complete freedom in delivery and trade.

2. The law of value should be permitted to play its proper role. First, appropriate adjustments in vegetable prices will gradually insure a reasonable difference in price among differing commodities. It will also gradually eliminate the unnatural inversion of purchase and retail prices. It will reasonably provide for all kinds of price differences, such as for quality, season, region, etc. Second, different prices should be used for differing varieties. A planned floating price would be used for varieties purchased by the state. Free markets would determine the prices of the other vegetable varieties. At the markets, producers, managers, and consumers would negotiate prices based upon market supply and demand. That is to say that aside from the principal vegetable varieties, such as greens, cabbage, Chinese cabbage, winter melon, and others, the prices of the other vegetables would be completely unrestricted. Third, power should be decentralized and prices should be set flexibly. The managing agencies could set prices, within stipulated guidelines, to procure vegetables in short supply or to sell off vegetables in oversupply. Fourth, deficits caused by state policy should still be subsidized. At present, it would be impossible to eliminate the subsidies for vegetables. However, the subsidies should be reasonable and applied appropriately. The subsidy should be no more nor less than the deficit. Mixing together deficits caused by policy and deficits caused by management does not promote production and the balancing of supply and demand. Nor does it help in the improvement of operational management in enterprises. The total amount of subsidy, and the quantity

of vegetables distributed, should be linked with economic efficiency. A new system should be considered in which, based on the amount of losses in past years, "all responsibility is assigned for a set amount, operational deficits that exceed the set amount will not be subsidized, and a portion of savings effected by reducing the deficit can be retained."

3. Wholesale vegetable markets should be established. This kind of market should be primarily a state commercial organization, but at the same time producers, managers, and consumers all should participate in various economic forms. The scope of operations should be varied, and a new commercial forum will be provided where producers and consumers come directly face-to-face. Moreover, the market itself must be a commercial enterprise and keep independent account books. These kinds of vegetable wholesale markets should have a number of different functions, such as providing a location for wholesale trade or for exchange of trade news. They could also store or process goods, taking in and sending out goods, and in so doing stabilizing prices.

4. The autonomy of vegetable retail operations should be strengthened. Commercial enterprises with truly independent account books and which are truly responsible for their own profits and losses should be established. Retail vegetable markets must have appropriate power over "personnel, finances, materials" and over "production, distribution, and marketing." They should have the power within policy regulations to purchase goods from a variety of channels, displacing the centralized distribution of vegetables from the upper levels of administration. Many kinds of operations should be permitted, with vegetables regarded as the primary concern. They should have the power to adjust the retail price of vegetables within limits set by the state. They should have the power to approve different operational styles and services. Within the markets themselves, the motivation of the employees should be spurred by using a contract responsibility system that incorporates flexible wages and profit-sharing and that appropriately opens up greater compensation differences among the employees.

5. The unsatisfactory aspects of the administrative system should be reformed. There should be centralized supervision of vegetable production and marketing. The existing three units of the city vegetable work leadership group, the vegetable company in the city commercial bureau, and the vegetable office within the city's agriculture bureau could be combined into one unit. It would not belong to agriculture, nor to trade, but would be a unit belonging to the city government. It would concentrate centralized leadership and management over all of the city's vegetable production and marketing. In the new administrative organization, politics and administration should be separated. Administration should be simplified and power should devolve to lower units. The economy should be managed from a macroeconomic perspective. For example, the office should set a development strategy, a plan, and policies for vegetable production and operations. It should coordinate economic links between units. It should collect and transmit news and take measures to effect economic adjustments. (This has been selected from an article prepared by the Shanghai Municipality Economic Reform Symposium. The editors have made some changes.)

SHANXI

MEASURES TO ENSURE CORN EXPORTS IMPLEMENTED

Taiyuan SHANXI NONGMIN in Chinese 2 Jan 86 p 2

[Article: "Provincial Government Formulates Measures To Ensure Corn Exports"]

[Text] This reporter has learned from relevant departments that: In order to ensure this year's one billion jin corn export assignment, the provincial government at the end of last year approved and circulated a "Summary of Minutes from the Meeting on Exporting Corn," and decided to establish a corn export office to be responsible for coordinating, supervising, and inspecting corn export work. It was asked that people's governments at all levels strictly control the outflow of corn supplies. From now on departments at all levels may not sell corn on their own initiative to any "suitcase businessmen" for resale at a profit without the approval of the provincial grain department. Before completion of fixed quota purchase contracts, no unit or individual has the power to sign a contract. Those that have already been signed are all null and void. The portion of foreign exchange left from exporting corn will continue to be divided among the prefecture, city, corn supply units, and export operation units according to the "four by four by two" ratio. From January of this year, the management fee for prefecture, city, and county foreign trade departments that manage corn will be raised from one percent to 1.5 percent. One-tenth of one percent of monthly management fees from the amount of money transferred out for corn by the Provincial Grain and Edible Oil Import and Export Company will be used as an incentive.

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SICHUAN

NEW FEATURES IN LIVESTOCK INDUSTRY DISCUSSED

Chengdu SICHUAN RIBAO in Chinese 6 Nov 85 p 2

[Article by Chen Qingfu [7115 1987 4395]: "New Features in Sichuan's Livestock Industry"]

[Text] Since implementing this year's Central Committee Document No 1 and the provincial CPC "Decision To Accelerate Development of the Livestock Industry," the situation in Sichuan's livestock industry is better than expected. It is estimated that at year's end hogs on hand will exceed 60 million head; 34 million will have been shipped out and if another 5 million head were added, it would make a solid 10-percent increase over last year. During the first three quarters, pork and milk production increased 26.8 and 29 percent, respectively, over the same period last year. Total large livestock on hand is more than 9.74 million head and is continuing to rise; sheep on hand total 3.78 million head, reversing a declining trend; and domestic fowl, meat rabbits, fur rabbits, and ducklings are doubling and redoubling in volume. Livestock production is day by day becoming an important source of prosperity among Sichuan farmers.

The excellent circumstances in Sichuan's livestock industry include many new features attracting the attention of many people.

First, the feed industry is growing tremendously. It is estimated that by year's end 4 billion jin of feed can be produced in Sichuan, a more than 100-percent increase over last year. This indicates that feeding methods have changed from the previous one by one process. The quick growth of the feed industry is due to first, that the industry is no longer "prisoner to the plans" of the bureaucracy. Individuals can team up to set up a factory and hence development is becoming horizontal, rather than vertical as in the past. Second, farmers are jointly raising the capital to start small feed factories and are finding resources locally, processing locally, and marketing locally. These factories are showing great wisdom by distributing far and wide to villages, limiting production procedures and cost, keeping prices reasonable, and making things convenient for the people. Third, technical responsibility contracts have been integrated with the growth of the feed industry. Livestock departments are responsible for improving domestic livestock-raising technology, preventing the outbreak of epidemics, and treating disease and increasing the weight of livestock by furnishing good breeds. All of this depends upon guaranteed supplies of high quality, matched and mixed feeds.

The variety of breeds in domestic animals is improving. In the past 25 percent of hogs, which are the main component of the livestock industry in Sichuan, were hybrids. Some areas are maintaining the status quo, but this year hybrid hogs are expected to surpass 40 percent of the total by the end of the year. Some areas that are developing faster, such as Nanchang Prefecture and outlying areas of Chengdu, have from 70 to more than 90 percent hybrids. In recent years there were no developments in the sheep industry, but this year progress has been made. Development has been particularly quick in Liangshan Zhou. In some counties the number of sheep has increased by 70 percent. Both the quality of the wool and the output volume have risen sharply and sheep farmers' income has increased significantly as well. Economical hybridization has begun to appear in several counties. There are already more than 1 million Jianchuan hybrid ducks (Jianchang Ducks are local ducks) in important counties resulting in striking economic benefits and stimulating the duck raising industry.

Production of fur rabbits has seen a breakthrough in growth. By year's end it is estimated that the number of rabbits on hand will surpass 5 million, more than doubling last year's total. Wan county has gone from 360,000 to 1.6 million rabbits and the average per capita income of Shizhu and Yingjing counties, which exclusively raise rabbits, achieved an increase of more than 100 yuan in 1 year. This is a fantastic feat, which indicates that if an area exploits its local endowments and concentrates all its efforts on a certain project, a new state of affairs can emerge.

Sichuan's integrated livestock-raising system, in which households are associated with certain farms, has gotten off to a good start. Sichuan's breeding farms, production farms, pasture lands, and veterinary centers are to support and spur on surrounding specialized livestock households, larger specialized households, and joint specialized households. They are making progress along a new avenue and accumulating new experiences. Chengdu's Chenghua breeding farm is going outside its own boundaries and furnishing good chicken varieties to specialized households; it has already signed technological and economic responsibility contracts with 11 households that raise 20,000 ducks; the income derived from each egg-laying duck is 6 to 9 yuan. The Xuanhan County Yunneng cooperative pasture has chosen the associated family route and is developing a processing and marketing network. This system has upgraded commercialization, provided technology to livestock-raising households, improved feeds and breeds, and increased livestock commodity purchases. It has already given farming additional vitality and paved the way for growth in livestock industries.

The cultivation of grasses is part of the plant-cultivation industry and it too has achieved some satisfying results. Under the guidance of the Central Committee directive regarding the reorganization of the production structure, the cultivation of grass and trees, and the development of the livestock industry, grass cultivation in Sichuan is spreading from pasture lands to the interior and from mountains to the hills and the plains. By the end of the year, nearly 660,000 mu will have been planted in grass by hand; furthermore both grass and seed are already being produced, resulting in benefits. In some

places, efforts have begun to alleviate the seasonal clash between livestock and pasture land so as to alter the awful cycle of plumpness in autumn, slenderness in winter, and death by spring.

These are several of the new features that have appeared as part of the excellent situation in Sichuan's livestock industry; they represent the direction and path of the livestock industry and they indicate an evolution from traditional methods of raising livestock to more technologically advanced ones. It has also changed from a family sideline to a main industry and given impetus to commercialization.

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SICHUAN

STATE FARMS RECORD BEST YEAR

Chengdu SICHUAN RIBAO in Chinese 27 Dec 85 p 1

[Article by He Xiaofang [0149 1321 2455] and Zhang Dayuan [1728 1129 0337]  
"We Must Insist Upon Reform, Carry Out Readjustments, Implement Contracts, and  
Combine Management; More Than 300 State Farms in Sichuan Have Put On a New  
Face; This Year's Economic Results Are the Best Since the Farms' Establishment"]

[Text] The more than 300 state farms in Sichuan have insisted upon reform, carried out enterprise readjustments, and promoted family-run farms and the contract responsibility system. They have also implemented the combined management of agriculture, industry, and commerce. This year's economic results are the best since their establishment. It is predicted that total gross production will reach 180 million yuan. Profits will exceed 20 million yuan, and the farms will pay 10.05 million yuan in taxes. These are, respectively, increases of 16, 14, and 12.4 percent compared to last year.

Most state farms in Sichuan were established in the 1950's and 1960's. Problems with the age and lower educational levels of their leadership cadres are relatively obvious. After the reform of the leadership cadres during the past 2 years, a group of intellectuals has stepped into the leadership positions and brought vitality to the state farms. They are young, energetic, familiar with their professions, and possess a spirit of creativity. During the reform, every farm has generally promoted multiple forms of output-related economic responsibility systems. These forms include family-run farms and "major contracted tasks." At the present time, there are more than 8,600 farms of all types run by workers' families. These workers are about one-third of the total work force. Those that do not belong to family-run farms have also implemented some type of economic responsibility system such as output-related and profit-related or single-job contracts. In this way, they have overcome egalitarianism and increased working efficiency. One cotton seed farm in Jintang County has promoted a "major contracted task" in agricultural production and developed farms run by workers' families. They also implemented a "five fixed, one reward/punishment" responsibility system in industrial production. Economic results have been obvious. The total value of industrial and agricultural production for the first 9 months of 1985 is equivalent to that of entire year 1984.

State farms have also emphasized enterprise structural reforms, conscientiously realized their internal potential, utilized unique resources, and developed

industrial and industrial sideline production. State farms have also effectively solved problems involving unstable farm income and farm products that are too simple or of low value. They have also played a major role in revitalizing the farm economy, increasing income, accumulating funds, and expansion for further production. The state farm system has also made a special effort to increase product quality. In the past 2 years, more than 30 products have been cited for their outstanding quality by the state, the Ministry of Agriculture, Animal Husbandry, and Fishery, and Sichuan Province.

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CSO: 4007/210

SICHUAN

UNPARALLELED PROSPERITY FOR SWINE INDUSTRY REPORTED

Chengdu SICHUAN RIBAO in Chinese 19 Dec 85 p 2

[Article by Zhang Xinqin [1728 2450 3830]: "Reform Has Brought Unparalleled Prosperity to Swine Industry in Sichuan; This Year Commodity Swine Ready for Sale May Reach 43 Million, and Proportion of Lean Swine Continues To Increase; Large Number of Exported Swine Supplies Every Major City in the Nation; Sichuan Has Become Largest National Commodity Base for Swine"]

[Text] Following 7 years of continuing increases, the swine industry in Sichuan has made new gains this year. The total swine population is estimated to be 60 million, and 43 million are commodity swine ready for sale. This is the largest number ever and exceeds last year's production by more than 5 million. The value of livestock products in Sichuan is now 21.1 percent of the total value of agricultural products. Pork products account for 70 percent of the value of livestock products. The swine industry has become a major component of the rural economy in Sichuan.

This favorable situation involving continuing increases in the swine industry in Sichuan is the result of a recent series of major reforms in the swine industry:

--Following the 3d Plenum of the 11th CCP Congress, agriculture has emphasized management at the household level. The swine industry has used the family swine farm as a base, vigorously assisted swine specialized households, and has completely abolished the former policy of "eating from a common pot." The reform of swine ownership has dramatically stimulated farmers' enthusiasm for raising swine. Family swine farms have implemented a "combine agriculture and livestock" policy to completely and reasonably use their resources. Surplus labor has been transferred out, and productivity has increased. The percentage of commodity swine in Sichuan has increased from 35 percent in 1953 to 67 percent in 1984. Commodity swine for sale in Sichuan are one-sixth of the total available in the nation. Last year per capita consumption of Sichuan pork in large and middle-sized cities of our country exceeded 7 jin. As a matter of fact, Sichuan has become the largest commodity base for swine in the nation.

--Pork price reform has stimulated development of swine breeding. In the past, we adopted several measures to solve urban meat-supply problems. These measures included distribution of supplemental grain, division of feed lots,

subsidies in the form of extra work credits, and higher prices for pig manure. We, therefore, paid a relatively high price to solve this problem. This year Document No 1 of the Central Committee was implemented, restrictions on pork prices were removed, and commodity production developed according to the law of supply and demand. Although prices have increased, increases in Sichuan have been less than those nationwide and are reasonable in light of local conditions. As a result, market prices for meat have stabilized, swine development has been stimulated, farmers' income has increased, and market supplies are adequate. These events are beneficial for producers, management, and consumers.

--Reform of the pork-marketing system has solved the problem of "hard to buy and hard to sell." In recent years, Sichuan has insisted upon multiple-approach marketing and changed from a "one knife" to "multiple knives" approach. Cooperation among the following sectors has effectively solved the problem of "hard to sell pigs": state-run food departments, supply sectors, marketing specialized households, township enterprises, and livestock-industry merchants. In 1981 there were only 35 million swine for sale in Sichuan, but marketing problems produced the "hard to sell pigs" problem. This year we passed the 40-million-swine barrier, and a combination of our insistence upon a multiple or "multiple knife" approach and removal of pork price restrictions has produced very active swine management. Except for Shaanxi and Anhui provinces, the entire nation has come to Sichuan to purchase pork. Many swine-producing counties have signed production-sales contracts with more than 10 provinces. Farmers now breed their swine with no worry about the future. The size of swine-breeding specialized households has continuously increased, and there were 490,000 such specialized households last year (2.5 percent of all agricultural households). There have been further increases this year.

--The livestock economic system that had lost the connection between production and sales has been reformed. After removal of pork price restrictions, reform of this system became unavoidable. At the present time, two major counties for lean swine production, Jianyang and Pixian counties, have proceeded with reforms. Food companies have been placed under the administrative management of the animal husbandry bureaus. Coordination units have been established for horizontal communication between regional or township food stations and livestock stations. These two parties are economically independent, however. After 3 years of reform in Jianyang County, all tasks and goals have been exceeded, taxes and profits of 8.7 million yuan have been paid, and 100,000 lean commodity swine have been exported this year.

--Traditional swine-breeding methods have been replaced by scientific breeding methods. Rural areas in Sichuan have combined traditional experience with modern scientific technology to gradually form a comprehensive system of swine-breeding technology known as the "five Reforms." These are: feeding lean cross-bred swine rather than local fat swine; early transfer of weaned piglets to alternative feeds; replacing simple feed with mixed feed; changing from cooked to raw feed; and the use of direct-line breeding and intensive preventive injections instead of "random management." The swine-breeding service system in Sichuan is better established, and all levels of the financial sector strongly support the development of the swine-breeding industry. This

year the provincial finance bureau has spent 1.5 million yuan to purchase lean meat breeding stock such as Landrace, Duroc, and Hampshire swine. Between 1983 and 1985, the provincial finance bureau has invested 11.5 million yuan in the feed industry. It is predicted that production of mixed feed will reach 3 billion jin this year, and the material foundation for scientific swine breeding is much stronger.

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SICHUAN

BRIEFS

SICHUAN TEA EXPORTS THRIVING--Sichuan tea exports are thriving. As of 20 October, this year's tea exports are already close to equalling all of last year's and earnings have already surpassed last year's. As it is now the high season for tea exports, it is calculated that this year's earnings will exceed last year's total earnings by around 50 percent. Under the guidance of the open door policy, the volume of tea exports from Sichuan has been growing yearly. Sichuan tea exports are now more than 20-fold that of 1980. The areas being sold to have grown to 10 nations including the United States, England, France and the FRG. Sichuan is the nation's most important producer of tea. Tea plantations now cover an area of 1.7 million mu, an area 740 percent greater than in 1950, and output is 620 percent greater. In the 6 years since the 3d Plenum of the 11th CPC Central Committee, tea output has increased by nearly 400,000 dan, which is equal to the total growth in the 30 years after the establishment of the People's Republic. The income of tea farmers in the last 6 years increased by almost 100 million yuan over the previous 6 years, thus allowing the government to collect 20 million more yuan in taxes. At the same time that more tea was being planted, the relevant departments actively improved methods of tea picking, promoted new processing technologies, and greatly upgraded quality. In 1985, Sichuan's black tea, Bamboo Leaf green tea and Emei Mountain raw green tea were judged to be high quality products at the 24th World Food Fair. The teas won three gold medals and superior quality certificates. [Text] [Chengdu SICHUAN RIBAO in Chinese 7 Nov 85 p 1] 13030/12795

PORK CONSUMPTION RECORD SET--The Sichuan Food Corp. revealed that according to the statistics bureau, Sichuan's annual per capita consumption of pork reached 35 jin, double the 18 jin consumed in 1978. This is by far the highest consumption level attained since liberation and much higher than any other province. It is estimated that this year average per capita consumption will surpass 40 jin. Last year the per capita consumption of pork nationwide was 26 jin, 7 liang, while Sichuan set a national record at 35 jin per capita. Furthermore, city and town dwellers in Sichuan last year on the average consumed 55 jin, 8 liang, which was also highest in the nation. After relaxing price controls on pork this year, pork production went up again and both urban and rural markets were well supplied. The price of meat rose less in Sichuan than anywhere else in China. After instituting measures in Sichuan to keep the rise in the selling price below the rise in the procurement price,

hog farmers earned nearly 300 million more yuan this year than last year and the price of pork remained stable. Consumers also benefited and this year another significant increase in consumption is expected. [Text] [Chengdu SICHUAN RIBAO in Chinese 10 Nov 85 p 1] 13030/12795

QUALITY TOBACCO RAISED--Sichuan tobacco (flue-cured, white ribbed [4101 5132] and sun dried) had a bumper harvest this year. As of the end of October, sales of flue-cured tobacco reached the 1-million-dan barrier, an all-time high. This year the main tobacco growing regions of Sichuan diligently carried out the provincial CPC "Directive" regarding the reorganization of the rural production structure in mountainous regions, the economic revitalization of impoverished areas, and the reorganization of the tobacco industry. Based on appropriate principle of centralism, the Jinshajiang area of Liangshan, the Penzhou mountain region of Yibin, and the Chuanhu Highway area of Fuling have been classified crucial tobacco regions. The production of superior tobacco in Liangshan, Yibin and Fuling prefectures grew significantly this year. Procurements of flue-cured tobacco increased provincewide and planned quotas were surpassed. National planned procurements of white ribbed tobacco were also fulfilled for the entire year; sun-dried tobacco procurements also grew significantly over last year. Tobacco plantations in the 48 principle tobacco-producing counties of Sichuan actively pushed for the standardization of tobacco cultivation techniques as a means to increase output and upgrade quality. Of Liangshan and Fuling prefectures tobacco, more than 70 percent is classified top- and medium-grade tobacco. As to Sichuan tobacco in general, 2 years ago only 43 percent was classified top and medium grade; this year 65 percent was classified as such, bringing it close to national levels. [Text] [Chengdu SICHUAN RIBAO in Chinese 19 Nov 85 p 1] 13030/12795

SICHUAN AQUATIC PRODUCTS INCREASING--Sichuan aquatic products have begun to grow steadily this year and the output of mature fish is steadily rising. From January through September the gross output of mature fish was 17.6 million jin, an increase of more than 50 million jin [as published] over the same period last year, an increase of 41 percent. Rural and city dwellers were furnished with many more fish products. The reasons for the rapid growth in aquatic products this year are: First, state enterprise and reservoir fisheries have gradually instituted an output-related responsibility system and have shifted fishery and farm labor toward more active fish raising. Second, capital has been raised, resources developed, and development of commercial fish products accelerated. Third, fish-breeding and fish-raising techniques have advanced. Also, much effort has been geared toward raising fish in rice paddies and by farm households. This has contributed to the increase in total output of mature fish. Fourth, government management of the fishing industry has been strengthened so as to maintain orderly production and promote its development. Fifth, price controls have been relaxed and markets have opened up, resulting in far more fish products in urban markets. [Text] [Beijing ZHONGGUO CUNZHEN BAIYE XINXIBAO in Chinese 18 Nov 85 p 1] 13030/12795

C.P.O.

FOREST RESOURCE SURVEY--During the past 3 years Sichuan has begun a secondary survey of forest resources in major forest areas. We have now completed one-third of the survey. The secondary survey of forest resources involves a detailed survey of counties where forest industries are important, the Forest Enterprise Bureau, and state-run tree farms. This survey will provide the clear understanding of natural and management conditions required for the production of a management plan and a foundation for future strengthening of resource management. For the past 3 years more than 3,000 technical personnel and a investigative brigade have been very active in the virgin forests of the northwest Sichuan plateau, mountainous areas surrounding the valley, and the Daba Mountains. The provincial office of forest industries has recently publicized the superior unit and individuals who have contributed to this work.  
[Text] [Chengdu SICHUAN RIBAO in Chinese 20 Dec 85 p 1] 13015/12790

EXCELLENT TOBACCO PRODUCTION--After continuous increases for several years, there were bumper crops of flue-cured, sun-dried, and white Burley tobaccos again this year in Sichuan. By the first part of December, purchases of flue-cured tobacco in Sichuan had exceeded the yearly plan by 18 percent, an increase of 42 percent over last year. Purchases of white Burley tobacco exceeded the yearly plan by 49 percent, while purchases of sun-dried tobacco increased almost 70 percent over last year. Areas producing "three tobaccos" are mostly poor mountainous areas, and the tobacco harvest stimulates economic development of these mountainous areas. "Three tobacco" production in Sichuan has increased farmers' income by more than 100 million yuan this year and provided almost 50 million yuan in taxes for the state. Flue-cured tobacco alone increased farmers' income by nearly 100 million yuan and created more than 30 million yuan in taxes. This year the quality of flue-cured tobacco improved greatly, and profits also increased. The quality of white Burley tobacco also improved. This year we expect to export nearly 1,000 tons.  
[Text] [Chengdu SICHUAN RIBAO in Chinese 23 Dec 85 p 1] 13015/12790

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YUNNAN

#### FARM MACHINE MARKET FOR 1986 PROJECTED

Beijing ZHONGGUO NONGJIHUA BAO in Chinese 4 Nov 85 p 7

[Article by Kui Laizhu [1145 0171 2691]: "Prospects for the 1986 Farm Machinery Market in Yunnan"]

[Text] There will be some increases and some declines in 1986 farm machine sales in Yunnan, and the trend will be one of continued, steady, coordinated growth. However, the general trend will decline somewhat from the 1985 base. The projected decline is 15 to 20 percent, as follows: There will be a fairly large decrease in medium and large tractors and automobiles for farm use. Harvesters will also assume a declining trend due to the overexpansion of tobacco, sugarcane, and other cash crop areas and the reduction in area cultivated in paddy, wheat, and other grains. Processing machinery is beginning to reach the saturation point in regions where conditions are satisfactory. In such relatively prosperous regions as Yuxi Prefecture in south-central Yunnan, dissemination of processing machinery has reached a proportion of 94.6 percent, though there is no way to use it in remote mountain regions that lack electricity. Agricultural drainage and irrigation machinery will not increase either because there has been adequate rainfall and there is plenty of stored water.

In 1986 the products that will be in great demand are as follows: (1) From January to August of 1985 11,000 walking tractors were sold, up 30 percent over the previous year, and 10,000 more have already been ordered for 1986. However, it is primarily Yunnan products that are selling well while goods from outside the province are becoming unmarketable. The market is changing step by step from a seller's market to a buyer's market. (2) There is a steady increase in semimechanical agricultural implements such as handcarts, horse-drawn carts, and so forth. The reason for this is that these relatively low priced commodities suit the current purchasing power of the vast majority of households and are much needed in production and construction. Since the Yunnan government in 1984 adopted the "locally managed, state subsidized" method of overhauling highways and building small power stations, they have needed a great many handcarts--around 100,000 per year. (3) Tractor repair fittings will increase steadily along with main engines. In 1986 we may sell 10 million yuan worth of them.

Characteristics of 1986 farm machine sales and reasons for declines are discussed below:

Sales characteristics of the 1986 farm machine market will be as follows:

1. There will be no change in the tight credit situation in the first half of the year and sales will continue to decline.
2. The corporate system will play an even greater role in major channels and certain enterprises that have multi-channel operations will progressively withdraw from the market.
3. Farm households will have an enhanced selection of farm machinery and the seller's market will become a buyer's market.
4. Through temporary price cutting, supply and marketing enterprises and production enterprises will enter into even more intense competition.
5. After summarizing the experiences and lessons of 1985, all enterprises will pay closer attention to market information and make this the basis for operating policies.

The primary reasons for farm machine sales declines in 1986 are as follows:

1. The tight money market and reduced credit are the major causes. Because Yunnan is situated in a frontier region, one-third of her remote mountain regions are still quite poor. If there is no credit, they are naturally affected.
2. There has been a decline in agricultural production. In 1985 Yunnan was subjected to relatively copious rainfall plus earthquakes, mud and rock slides, and other natural disasters, and over 10 million mu of land was stricken.
3. The direction of rural investment has shifted toward operating businesses and opening hotels, small food shops, industrial sidelines, and so forth.
4. Since capital construction was reduced there has been no supply of goods to be transported. In the past, medium and large tractors and handcarts hauled a lot of construction materials, and this has now declined.
5. There are other factors as well, such as the levy of surcharges on vehicle purchases, the excess burden on specialized farm machinery households, fuel shortages, and the unstable quality of some farm machine products.

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CSO: 4007/152

ZHEJIANG

FAVORABLE SITUATION IN SILK EXPORTING REPORTED

Hangzhou ZHEJIANG RIBAO in Chinese 2 Oct 85 p 1

[Article by Shen Xilin [3088 6932 2651] and Wu Jingen [0702 6855 2704]:  
"Pleasing Situation in Export of Silk Products from Zhejiang Province; Total  
Production of the First 9 Months of 1985 Worth \$1.40 Million"]

[Text] The Central Committee's policy of opening up to the outside has strengthened the development of the silk industry in Zhejiang Province. Within the last few years, the value of silk exports has been increasing 19.52 percent annually. By mid-September of 1985, the total value of export within that year has reached US \$140 million, an increase from the same period of 1984. The targets of export have also been increasing and they now include more than 60 other countries and regions.

Since implementation of the state's open door policy, the silk industry in Zhejiang Province has also stopped practicing "self-containment." Instead, the industry has been actively engaged in dealing with foreign silk industries, and also expanding their commercial transactions. AS a result, a preliminary network for overseas sales and service has been set up. Within the last few years, the relevant departments have repeatedly invited foreign customers to participate in various trading conferences. In addition, through their commercial negotiations, the various silk companies in Zhejiang Province have also invited business people from Italy, the United States, and Hong Kong to visit the silk factories in Hangzhou and Huzhou, to achieve greater mutual understanding by direct contact. At the same time, during the visit to China of some of the business people, agreements have been made for their counterparts in the Zhejiang silk industries to visit and inspect advanced production methods and equipment of silk industries abroad. In addition, personnel from the foreign trade departments would also be going abroad to both negotiate commercial dealings and to obtain information regarding silk industries internationally. All these represent efforts to create new markets in addition to the old stable ones. After the Autumn Canton Trade Fair of 1984, the Zhejiang Joint Silk Co. set up commercial dealings with the Xinye, Yibi and many other Hong Kong companies. Thus far in 1985, the Zhejiang Joint Silk Co. has already been opened up commercial channels with customers in 63 other countries and regions.

The Zhejiang Joint Silk Co. has utilized their foreign currency and advanced technology to modernize the old industry, promote the innovation of new products and thereby increase the industry's ability to create foreign exchange income.

By September 1985, the number of new silk and satin products from Zhejiang industries reached over 100, and more than 10,000 new designs have also been created. In addition, the exported silk has also changed in nature from being primary raw materials to finished products, thereby increasing the strength of silk products from Zhejiang Province in their competition with other silk products on the international market.

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ZHEJIANG

# AFFORESTATION ON CULTIVATED SLOPES PROCEEDING

Hangzhou ZHEJIANG RIBAO in Chinese 2 Oct 85 p 1

[Article by Guo Fu [0948 1381] and Guan Sheng [7070 5110]: "A Total of 380,000 Mu of Cultivated Slopes Throughout Zhejiang Afforested"]

[Text] A schedule of afforestation has been determined after investigations were made in the extensive hilly regions of Zhejiang Province. Both the acreage involved and the state of cultivation of the slopes were studied before cultivation stoppage was planned. According to these statistics, there are altogether 2.1 million mu of cultivated land in Zhejiang Province with slopes of more than 25 degrees. It has been decided that cultivation on 130,000 mu of this total acreage of cultivated slopes should be stopped within the next 3 to 4 years. By the first half of 1985, this has already been carried out on 380,000 mu of the cultivated slopes.

In their consideration of cultivation stoppage and afforestation, many of the areas have coordinated the duration involved with economic benefit and production effect. At the same time, attention is also being paid to the growth speed of the various tree species that are to be planted in afforestation. In the process of planting timber forests, care has also been made in choosing most effectively with regard to the specific soil type involved, forests of high economic benefit, trees that best serve conservation purposes, and trees that will yield fruit or medicine. In the Taizhou area, 400,000 mu were afforested during the spring of 1985. Of this total acreage, 190,000 mu have been planted with newly developed high-yield species, such as oranges and tangerines, strawberries, loquats, peaches, pears and four-season bamboo. Some 90,000 mu of this afforestation that has been done for economic benefit was on slopes formerly under cultivation. Around the Xin'an reservoir in Chun'an County, cultivation on 17,000 mu was stopped and in its place, such trees that benefit soil conservation as fur, pine, cork tree, and sassafras have been planted in addition to oranges, tangerines, and loquats.

In their work of cultivation stoppage and afforestation, many of the regions have effectively given assistance to the people in solving problems of finance and grains, thereby accelerating the task of much needed afforesting of cultivated slopes.

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ZHEJIANG

# INCREASE IN TOTAL ACREAGE OF FISH-BREEDING REPORTED

Hangzhou ZHEJIANG RIBAO in Chinese 30 Sep 85 p 1

[Article by Li Liang [2621 5328]: "Fish-Breeding in Both Ponds and Rice Paddies Results in Total Acreage Increase in Zhejiang Province of More Than 240,000 Mu"]

[Text] During 1985, the making of more fishponds and the new practice of breeding fish in rice paddies have resulted in the increase of fish-breeding acreage by 246,000 mu. The total acreage involved in fresh water fish-breeding now amounts to 700,000 mu. During the first half of 1985, the production of freshwater fish in Zhejiang Province reached more than 657,000 dan, an increase by more than 26 percent when compared with the same period in 1984.

Farmers have increased their activities of making fishponds in the general wish to both produce and manage for themselves. Fishponds have, therefore, been created in low-lying terrain, out-of-use canals, and abandoned beaches. Thus, farmers have been able to both make their ponds and investment in their own business during the same year. In addition, the departments that handle aquatic products throughout the various regions have also been providing good, meticulous services--to the great satisfaction of farmers. During the period from winter 1984 to spring 1985, 66,000 mu of basic ponds for breeding freshwater fish were made. In addition, various other types of fishponds that were made by the people themselves amounted to another 30,000 mu. As a result, during 1985 in the whole province, total fish-breeding area increased by more than 349,000 mu.

In Zhejiang Province, breeding fish in rice paddies is already being practiced by 200,000 farmer households, involving a total of around 350,000 mu. Altogether more than 240 million fingerlings have been used. Among these, more than 120 million belonged to the Xiahua variety with other species amounting to more than 3 million. In the Jinqu basin where there is a greater abundance of grains, the farmers rotate rice cultivation on fish breeding. In the Ningbo area, the practice of joining ponds with rice paddies is carried out in order to increase the density of the fish in the breeding area. In the villages around Jiaxing, the rice paddies, which form the primary breeding ground for fish, are supplemented by inland ponds that abound in this area. In Jiashan County, there are 4 "10,000-dan villages" where freshwater fish are bred, and 19 "1,000-dan villages."

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ZHEJIANG

BRIEFS

LEAN SWINE CENTERS--At the moment, stock centers for the four major species of lean swine in the world have been set up in Zhejiang Province. These four major species are: the Landrace variety originally from Denmark, both the Duroc and Hampshire from the United States and the Yorkshire from England. Apart from the stock centers in Hangzhou and Jinhua County that were set up in 1964 and 1983, respectively, the two others were set up during 1985. Among these stock centers, there are about 560 stock sows whose annual production is about 8,000. In addition to satisfying the demand in Zhejiang Province, 5,000 to 6,000 head of stock swine are sent to other provinces, thereby facilitating the development of lean pork products throughout the country. Beginning in 1983, new breeding had also begun to be practiced in Zhejiang Province. By 1985, the 23 counties that had started this practice had grown to 50, and new stock swine reached 1,500 in number. The landrace variety that provides either the swine or the sow has been used to produce 2 or 3 hybrids. As a result, the leanness in the meat produced has increased by about 50 percent. [Text] [Hangzhou ZHEJIANG RIBAO in Chinese 30 Sep 85 p 2] 12740/7051

MARINE AQUACULTURE DEVELOPMENTS--During 1985, there have been new developments in aquaculture production within the coastal fishing grounds along Zhejiang Province. As a result, in the first half of 1985, total marine aquaculture production reached 1,010,000 dan, an increase of 33.4 percent over the same period in 1984. The estimate for the annual total production of 1985 is more than 1.9 million dan, an increase of 25 percent over 1984. In addition, other favorable conditions have also developed in both the processing and sale of these marine aquaculture products, as seen in the emergence of multichannel and multilayer management. The joint company that was started in Sanmenwan has already packaged 100 tons of razor clams with shells. This product, sold mainly in the northeastern urban markets, has been very popular with consumers. Tongtong County has been actively developing their laver production in small-packaged processing and has opened a number of sales channels, wherein individual purchasing and marketing households and small peddlers account for 55 percent of sales. [Text] [Hangzhou ZHEJIANG RIBAO in Chinese 1 Oct 85 p 1] 12740/7051

CSO: 4007/54

SELECTION STUDY OF OPTIMUM TEMPORAL REMOTE SENSING IMAGES FOR VEGETATION  
RESOURCES INVENTORY

Beijing ZHIWU XUEBAO [ACTA BOTANICA SINICA] in Chinese No 5, 85 p 531

[English abstract of article by Zou Shanghui [6760 1424 6540] of Central China  
Teacher's College, Geography Department]

[Text] Vegetation remote sensing data from sensor change with phenology and sun altitude angles. Therefore, the optimum temporal images must be selected from different periods for vegetation studies. The season of the greatest vegetation reflection difference in the visible and near-infrared regions is the optimum time for vegetation classification studies.

The results indicate that the absolute difference and relative difference of plant species in reflection are greatest in spring and early summer. Then the greatest number of crop types can be identified in the images. The autumn images are most suitable for identifying deciduous leaf vegetation, for the leaf pigments of all kinds appear at that time. Vegetation reflection in MSS<sub>5</sub> and MSS<sub>7</sub> decrease with the decrease in the altitude angles of the sun. Therefore, appropriate images of the sun altitude angles must be selected for the study of vegetation.

The author concludes that the optimum temporal images of remote sensing for vegetation studies in Hubei Province or the north tropics are those taken in April, May, and November.

**Keywords** Plant spectral curve; plant phenological change; optimum temporal images; color infrared aerial photographs

CSO: 4011/18

# DISTRIBUTION OF SEWAGE IRRIGATION IN CHINA, ANALYSIS OF FORMATION

Beijing DILI YANJIU [GEOGRAPHICAL RESEARCH] in Chinese No 3, Sep 85 p 46

[English abstract of article by Xia Zenglu [1115 1073 4389] and Li Senzhao [2621 2773 3564] of the Institute of Geography, Academia Sinica]

[Text] China is divided into three typical sewage irrigation realms on the basis of comprehensive natural conditions and characteristics of sewage irrigation. Geographical differentiation of sewage irrigation in China and its cause of formation are emphatically studied. Geographical distribution of sewage irrigation in China is as follows:

Division/Region	Area of sewage irrigation (10,000 mu)	Percentage of area
I Arid farming division, northern China	1142.71	86.56
I-1 Cold and humid region of Northeast China	68.53	5.19
I-2 Warm and subhumid region of North China	1074.19	81.36
II Paddy field division, southern China	138.74	10.51
II-1 Humid and warm region of Central China	112.81	8.55
II-2 Humid and hot region of South China	25.93	1.96
III Arid division, Northeast China	38.76	2.94
III-1 Sub-arid region north of the Great Wall	24.40	1.85

III-2 Arid region, Northwest China	14.36	1.09
IV Qinghai-Xizang frigid plateau	sporadic	trace
IV-1 Sichuan-Xizang alpine and river valley region	sporadic	trace
IV-2 Chiangtang Plateau region	0	0

The numerical value of the three factors influencing the distribution of sewage irrigation has been analyzed and their coefficients of weight determined. The general index of sewage irrigation distribution of the various regions was calculated. The conclusion is that water and fertilizer is the leading factor of distribution, followed by cultivated area and population.

CSO: 4011/5

SATELLITE RNA AS BIOLOGICAL CONTROL AGENT OF CUCUMBER MOSAIC VIRUS

Tianjin ZHIWU BINGLI XUEBAO [ACTA PHYTOPATHOLOGICA SINICA] in Chinese No 3,  
Sep 85 p 149

[English abstract of article by Tian Wenhui [3944 2429 2585] et al of Hebei Agricultural University Department of Plant Protection, and Zhang Xiuhua [1728 4423 5478] et al of Institute of Microbiology, Academia Sinica]

[Text] The effect of satellite RNA on host range, symptom, and aphide transmission of CMV and CMV-S51 (containing satellite RNA) were studied. The host range of CMV-S51 was much narrower than CMV. CMV can infect 20 plant species of 6 families, while CMV-S51 can only infect 10 species of 3 families. CMV-S51 was symptomless on the infected plants except pumpkin. CMV caused severe mosaic, fern leaf and necrosis in most of the infected plants. The transmission efficiency of CMV-S51 by Myzus persicae was lower and the incubation period was longer than that for CMV.

CMV-S51 was found to protect pepper plants against the infection of CMV. The optimum interval between CMV-S51 and challenge inoculation was 15 to 20 days in the greenhouse.

CSO: 4011/11

GENETIC STUDY OF ESTERASE ISOENZYME IN RICE-SORGHUM HYBRIDS

Beijing ZUOWU XUEBAO [ACTA AGRONOMICA SINICA] in Chinese No 2, Sep 85 p 180

[English abstract of article by Duan Xiaolan [3008 2556 1526] et al of the Institute of Crop Breeding and Cultivation, Chinese Academy of Agricultural Sciences, Beijing]

[Text] The esterase isoenzyme of the hybrids between rice and sorghum have been analyzed. The zymogram of the esterase isoenzyme in hybrids are essentially the same as those of the female plant (Japanese type). But a No II band in embryo, anther and other organs of hybrids which did not appear in maternal plants was found in sorghum. The segregations of this band could be seen in each generation, but they appeared most frequently in  $F_2$ - $F_3$ , decreased in  $F_4$ , and stabilized in higher generations. There are seven types of segregations found in  $F_2$ - $F_5$ . Experimental results show that the hybrids can obtain the genetic material from sorghum, which results in the phenotype variation of the progenies at the molecular level. This indicates that the heterogenetic DNA obtained by the hybrid undergo a gradual process of exclusion, segregation, and final stabilization in their progenies. The No II band appears again in the succeeding generations of the plants which have lost this band; it also indicates that the phenotype variation has taken place because of the controlling of gene expression, not because of the structure gene.

CSO: 4011/12

DETECTION OF VIROID BY SYNTHETIC PROBE

Shanghai SHENGWUHUAXUE YU SHENGWUWULI XUEBAO [ACTA BOICHEMICA ET BIOPHYSICA SINICA] in Chinese No 4, Jul 85 p 525

[English abstract of article by Yu Dawen [0060 1129 2429] et al of Shanghai Institute of Biochemistry, Academia Sinica, and Yang Xicai [2799 1585 2088] et al of the Institute of Microbiology, Academia Sinica, Beijing]

[Text] This paper reports a rapid and sensitive method for detecting viroid by a synthetic probe. The hybridization can be carried out at temperatures ranging from 10 to 42 degrees C and its sensitivity reaches to about 50 picograms. With this method, several samples can be detected at the same time. The synthetic probe d-TCCACCGGGTAGT, fully complementary to a common sequence present in PSTV, CSV, and CEV, was synthesized by the solid phase phosphite triester method and confirmed by sequence analysis.

CSO: 4011/7



SEPARATION, PURIFICATION OF HEMOLYTIC TOXIN FROM OXYTROPIS GLABRA DC

Shanghai SHENGWUHUAXUE YU SHENGWUWULI XUEBAO [ACTA BIOCHEMICA ET BIOPHYSICA SINICA] in Chinese No 4, Jul 85 p 500

[English abstract of article by Yu Meihui [0827 2734 6540] et al of Xinjiang August First College of Agriculture, and Liang Duo [4731 6995] of Yuli County, Xinjiang]

[Text] A toxic protein with hemolytic properties has been separated and purified from the seeds of Oxytropis glabra DC by means of ammonium sulfate fractionation, DEAE-cellulose ion-exchange chromatography, and sephadex G-50 gel filtration. Crystals, the largest of which measures 2.5 x 2.5 mm, have been obtained. Using the method of Baman and Hurtado, this toxin may be considered to be a phospholipase. Its HU<sub>50</sub> is 0.403 mg/ml.

The purified toxin upon injection to rabbits through the ear vein (1 mg/kg) caused the temperature to drop from 38.5 degrees C to 28 degrees C, and the number of red cells dropped 75 percent within 2 hours. The rabbits recovered after 24 hours. The toxic activity can be destroyed by trypsin or high temperature (100 degrees C).

The molecular weight of this protein is 27,400, with 217 amino acid residues.

CSO: 4011/7

STUDIES ON ENZOOTIC BOVINE LEUKOSIS VIRUS ISOLATION, IDENTIFICATION

Tianjin XUMU SHOUYI XUEBAO [ACTA VETERINARIA ET ZOOTECHNICA SINICA] in Chinese  
No 4, Nov 85 p 255

[English abstract of article by Ma Guangfu [7456 1639 4395] et al of Harbin  
Veterinary Research Institute, Chinese Academy of Agricultural Sciences,  
Harbin]

[Text] Bovine leukosis virus was isolated from a sample of the infected  
cattle. C-type virus particles were detected at the first passage of the  
leukocytic cell culture and at the second and fourth passages of monolayer  
cell cultures by electron microscopy. Its morphology and structure resembled  
typically what foreigners have reported.

The antigen prepared with the isolated virus was identified and compared with  
the American and Japanese antigens, and the results were identical.

Fourteen of the 16 sheep inoculated with the same infected sample used for the  
isolated virus showed positive reactions in the AGJD tests. C-type virus  
particles were detected in 6 of 10 leucocytic cell cultures. Most of the  
experimental sheep died and showed typically leukemia lesions.

As a result of our experimental work, we successfully isolated the bovine  
leukosis virus.

CSO: 4011/21

STUDIES ON ELISA FOR SCHISTOSOMA JAPONICA INFECTIONS IN CATTLE, BUFFALOES

Tianjin XUMU SHOUYI XUEBAO [ACTA VETERINARIA ET ZOOTECHNICA SINICA] in Chinese  
No 4, Nov 85 pp 250-251

[English abstract of article by Shen Jie [3088 2638] et al of the Shanghai Institute of Animal Schistosomiasis, Chinese Academy of Agricultural Sciences, and Zhou Qingtang [0719 1987 1016] et al of Hunan Agricultural College]

[Text] Enzyme-linked immunosorbent assay (ELISA) has been developed for the detection of Schistosoma japonica infections in cattle and buffaloes; 707 schistosome-free animals and animals infected with S.japonica were tested. The test has been found to have high sensitivity and specificity: 97.5 to 97.7 percent of S.japonica-infected animals were positive, and 97.2 to 98.5 percent of schistosome-free animals were negative. Eighty of 81 cattle infected with Fasciola, Paramphistomum, Orientobilharzia, and Echinococcus were negative; only one infected with Fasciola was positive. The test conducted in the endemic area also gave good result. The ELISA is not technically difficult to perform and is capable of handling a large number of samples.

CSO: 4011/21

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